

35	40	45
Asp Ser Arg Glu Arg Ile Pro Phe Leu Met Lys Lys Thr Ala Ser Ile		
50	55	60
Glu Thr Ile Val Val Ser Asn Glu Thr Glu Ala Leu Leu Leu Glu Asn		
65	70	75
Asn Leu Ile Lys Gln His His Pro Lys Tyr Asn Val Leu Leu Lys Asp		
85	90	95
Asp Lys Thr Phe Phe Cys Leu Ala Ile Ser Leu Ser His Ser Trp Pro		
100	105	110
Lys Val Glu Ala Ile Arg Thr Lys Ala Ile Thr Ser Ser Gln Arg Gln		
115	120	125
Leu Ile Phe Gly Pro Tyr Val Ser Ala Glu Ala Cys His Thr Leu Leu		
130	135	140
Glu Val Ile Ser Gln Trp Phe Pro Leu Arg Thr Cys Ser Asp Arg Glu		
145	150	155
Phe Ala Leu Arg Lys Arg Pro Cys Ile Leu Tyr Asp Met Lys Arg Cys		
165	170	175
Leu Ala Pro Cys Val Gly Tyr Cys Thr Pro Glu Glu Tyr Gln Gly Thr		
180	185	190
Leu Asp Lys Ala Ile Leu Phe Leu Lys Gly Lys Ile Glu Glu Val Val		
195	200	205
Lys Asp Leu Glu Lys Val Ile Gln Lys Ala Ser Asp Asn Leu Glu Phe		
210	215	220
Glu Gln Ala Ala Asn Tyr Tyr Arg Thr Leu Ser Leu Ile Lys Gln Ala		
225	230	235
Met Ala Lys Gln Gln Val Glu Lys Phe His Phe Gln Asn Ile Asp Ala		
245	250	255
Leu Gly Leu Tyr Arg His Lys Gln Arg Thr Ile Leu Thr Leu Leu Thr		
260	265	270
Val Arg Ser Gly Lys Leu Leu Gly Ala Arg His Phe Ser Phe Phe Glu		
275	280	285
Asn Ala Gln Glu Asp Gln Asp Leu Leu Ser Ser Phe Ile Leu Gln Tyr		
290	295	300
Tyr Val Ser Gln Pro Tyr Ile Pro Lys Glu Ile Leu Thr Pro Leu Pro		
305	310	315
Leu Glu Phe Pro Thr Leu Ser Tyr Val Leu Asn Ala Glu Ser Pro Pro		
325	330	335
Arg Leu Arg Ser Pro Lys Thr Gly Tyr Gly Lys Glu Leu Leu Asp Leu		
340	345	350
Ala Tyr Arg Asn Ala Lys Ala Tyr Ala Ala Thr Thr Leu Pro Ser Ser		
355	360	365
Ser Ser Pro Thr Lys Thr Leu Arg Ile Ile Leu Arg Met Ser Gln Tyr		
370	375	380
Pro Tyr Arg Ile Glu Cys Tyr Asp Asn Ala His Met Gln Gly Ala His		
385	390	395
400		
Ala Thr Gly Val Tyr Ile Val Phe Glu Asn Asn Gly Phe Asp Pro Lys		
405	410	415
Gln Tyr Arg Thr Phe Ser Ile Asp Ser Glu Lys Thr Gln Asn Asp Leu		
420	425	430
Ala Leu Leu Glu Glu Val Leu Leu Arg Arg Phe His Ser Leu Thr Thr		
435	440	445
Ala Leu Pro Asp Met Ile Val Val Asp Gly Gly Lys Thr His Tyr Asn		
450	455	460
Lys Thr Lys Lys Ile Ile Gln Thr Leu Asn Leu Thr Gly Ile Gln Val		
465	470	475
480		
Val Thr Ile Ala Lys Glu Lys Ser Asn His Ser Arg Gly Leu Asn Lys		
485	490	495
Glu Lys Ile Phe Cys Glu Thr Phe Pro Glu Gly Phe Ser Leu Pro Pro		
500	505	510
Thr Ser Asn Leu Leu Gln Phe Phe Gln Ile Leu Arg Asp Glu Ala His		
515	520	525
Arg Phe Ala Ile Ser Lys His Arg Lys Lys Arg Gly Lys Ala Leu Phe		
530	535	540
Glu Gln Glu Lys Ile Pro Gly Ile Gly Glu Val Lys Arg Lys Arg Leu		

545	350	555	560												
Leu	Gln	Lys	Phe	Lys	Ser	Trp	Lys	Gln	Val	Met	Leu	Ser	Ser	Gln	Glu
565							570							575	
Glu	Leu	Glu	Ala	Ile	Pro	Gly	Leu	Thr	Lys	Lys	Asp	Ile	Ala	Val	Leu
580							585							590	
Leu	Ala	Arg	Gln	Lys	Asp	Phe	Asn	Lys	Ser	Asp					
595						600									
<210>1012															
<211>481															
<212>PRT															
<213>Chlamydia pneumoniae															
<400>1012															
Gly	Asp	Pro	Cys	Thr	Ser	Arg	Cys	Cys	Arg	Ile	Phe	Leu	Arg	Gln	Val
1				5					10					15	
Thr	Leu	Arg	Lys	Asn	Ile	Lys	Thr	Tyr	Leu	Cys	Gln	Val	Arg	Asp	Ile
	20						25						30		
Glu	Arg	Leu	Met	Thr	Lys	Val	Thr	Thr	Gly	Leu	Ala	Gly	Pro	Arg	Asp
	35					40						45			
Ile	Gly	Thr	Leu	Arg	Asp	Ser	Phe	Ser	Ala	Gly	Ala	Gln	Ile	Tyr	Glu
	50					55						60			
Gln	Leu	Ala	Ser	Ala	Thr	Leu	Pro	Glu	Phe	Phe	Ile	Asp	Lys	Cys	Ser
	65					70				75			80		
Leu	Asp	Thr	Lys	Leu	Ala	Ser	Leu	Ile	Ala	Leu	Leu	Ser	Lys	Ser	Leu
	85						90						95		
Asn	Gly	Asp	Leu	Pro	Leu	Arg	Val	Ser	Asp	Gly	Asn	Ile	Phe	Val	Asp
	100						105						110		
Glu	Phe	His	Asn	Asp	Leu	Lys	Arg	Leu	Arg	His	Asn	Gln	Glu	His	Ser
	115						120						125		
Gln	Glu	Trp	Ile	Trp	Glu	Tyr	Gln	Glu	Arg	Ile	Arg	Lys	Glu	Thr	Gly
	130					135					140				
Ile	Lys	Lys	Leu	Lys	Ile	Cys	Phe	Ala	Gln	Ala	Leu	Gly	Tyr	Tyr	Ile
	145					150				155			160		
Glu	Val	Val	Ser	Ser	Glu	Phe	Ala	Pro	Gln	Leu	Pro	Lys	Asp	Phe	Ile
	165						170						175		
Arg	Gln	Ser	Arg	Leu	His	Ala	Glu	Arg	Phe	Thr	Thr	Ile	Glu	Leu	Gln
	180						185						190		
Gln	Phe	Gln	Asp	Asp	Met	Ser	Asn	Ile	Ser	Glu	Lys	Leu	Gln	Thr	Leu
	195						200						205		
Glu	Thr	Gln	Phe	Phe	Lys	Asp	Leu	Cys	Ser	His	Ile	Leu	Gln	Leu	Arg
	210						215					220			
Thr	Glu	Ile	Leu	Ala	Leu	Ser	Gln	Ser	Leu	Ala	Asp	Leu	Asp	Tyr	Ile
	225						230				235			240	
Ile	Ser	Leu	Ala	Asp	Leu	Ala	His	Ala	Gln	Gly	Tyr	Cys	Arg	Pro	Arg
	245						250						255		
Val	Asp	Met	Ser	Asp	Thr	Leu	Cys	Ile	Tyr	Arg	Gly	Cys	His	Pro	Val
	260						265						270		
Ala	Lys	Thr	Leu	Val	Asp	Thr	Gly	Lys	Phe	Ile	Pro	Asn	Asp	Thr	Glu
	275						280						285		
Met	Arg	Gly	Ser	Gln	Thr	Arg	Met	Ile	Leu	Leu	Thr	Gly	Pro	Asn	Met
	290						295				300				
Ala	Gly	Lys	Ser	Thr	Tyr	Ile	Arg	Gln	Ile	Ala	Leu	Leu	Val	Ile	Met
	305						310				315			320	
Ala	Gln	Met	Gly	Ser	Tyr	Ile	Pro	Ala	Lys	Ser	Ala	His	Ile	Gly	Val
	325						330						335		
Ile	Asp	Lys	Ile	Phe	Thr	Arg	Ile	Gly	Ala	Gly	Asp	Asn	Leu	Ser	Lys
	340						345						350		
Gly	Met	Ser	Thr	Phe	Met	Val	Glu	Met	Ala	Glu	Thr	Ala	Asn	Ile	Leu
	355						360						365		
His	Asn	Ala	Thr	Asp	Arg	Ser	Leu	Val	Ile	Leu	Asp	Glu	Val	Gly	Arg
	370						375					380			
Gly	Thr	Ser	Thr	Tyr	Asp	Gly	Leu	Ala	Ile	Ala	Gln	Ala	Val	Val	Glu
	385						390				395			400	
Tyr	Leu	Leu	Phe	Thr	Asp	Lys	Lys	Lys	Ala	Lys	Thr	Leu	Phe	Ala	Thr
	405						410						415		

His Tyr Lys Glu Leu Thr Leu Glu Asp His Cys Pro ~~Asn~~ Val Glu  
 420 425 430  
 Asn Phe His Ala Gly Val Lys Asp Lys Ala Gly Gln Pro Val Phe Leu  
 435 440 445  
 Tyr Glu Ile Leu Lys Asp Ile His Lys Lys Val Ser Ala Phe Met Ser  
 450 455 460  
 Pro Gly Leu Leu Ala Phe Pro Phe Val Trp Tyr Arg Glu Leu Ser Arg  
 465 470 475 480  
 Ser

&lt;210&gt;1013

&lt;211&gt;339

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1013

Val Met Thr Glu Lys Pro Thr Pro Met Met Glu Gln Trp His Gln  
 1 5 10 15  
 Cys Lys Glu Lys Ala Gly Asp Ser Val Leu Leu Phe Arg Met Gly Asp  
 20 25 30  
 Phe Tyr Glu Ala Phe Tyr Asp Asp Ala Val Leu Leu Ser Gln His Leu  
 35 40 45  
 Glu Leu Thr Leu Thr Gln Arg Gln Gly Ile Pro Met Ser Gly Ile Pro  
 50 55 60  
 Val Ser Thr Val Asp Thr Tyr Val Asp Arg Leu Ile Gly Lys Gly Phe  
 65 70 75 80  
 Lys Val Ala Val Ala Glu Gln Phe Gly Glu Pro Ala Lys Glu Lys Glu  
 85 90 95  
 Ser Lys Lys Ile Gly Pro Met Ala Arg Asp Ile Gln Arg Phe Val Thr  
 100 105 110  
 Pro Gly Thr Leu Leu Ser Ser Thr Leu Leu Gln Glu Lys Phe Asn Asn  
 115 120 125  
 Xaa Ile Val Ala Ile Thr Arg Ile Gly Ser Leu Phe Gly Phe Ala Cys  
 130 135 140  
 Leu Asp Leu Ser Thr Gly Ser Phe Phe Ile Glu Glu Cys Glu Asn Thr  
 145 150 155 160  
 Lys Glu Leu Val Asp Glu Ile Cys Arg Leu Ala Pro Ser Glu Val Leu  
 165 170 175  
 Ser Cys Asn Lys Phe Tyr Asn Lys Glu Thr Ala Ile Val Met Gln Leu  
 180 185 190  
 Gln Gln His Leu Lys Leu Thr Leu Ser Thr Tyr Ala Asp Trp Ala Phe  
 195 200 205  
 Glu His Lys Phe Ala Ser Gln Lys Leu Thr Thr His Phe Gln Val Ala  
 210 215 220  
 Ser Leu Asp Gly Phe Gly Leu Lys Gly Leu Val Pro Ala Ile Asn Ala  
 225 230 235 240  
 Ala Gly Gly Leu Leu Ser Tyr Ile Gln Asp Lys Leu Leu Leu Pro Thr  
 245 250 255  
 Lys His Ile Ala Ile Pro Gln Thr Arg Gly Lys Gln Gln Lys Leu Leu  
 260 265 270  
 Ile Asp Thr Ala Ser Gln Val Asn Leu Glu Leu Leu Ala Pro Leu Asn  
 275 280 285  
 Asp Pro Gln Gly Lys Asn Ser Leu Leu Arg Ile Met Asp His Thr Ser  
 290 295 300  
 Thr Pro Met Gly Gly Arg Leu Leu Arg Gln Ile Leu Ile Ser Pro Phe  
 305 310 315 320  
 Tyr Asn Pro Lys Glu Ile Leu Val Arg Gln Asp Ala Val Glu Phe Phe  
 325 330 335  
 Phe Gly Lys

&lt;210&gt;1014

&lt;211&gt;207

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1014

Leu Arg Thr Ala Met Tyr Thr Glu Glu Ser Leu Asp Asn Leu Arg His  
 1 5 10 15  
 Ser Ile Asp Ile Val Asp Val Leu Ser Glu His Ile His Leu Lys Arg  
 20 25 30  
 Ser Gly Ala Thr Tyr Lys Ala Cys Cys Pro Phe His Thr Glu Lys Thr  
 35 40 45  
 Pro Ser Phe Ile Val Asn Pro Ala Gly Ala His Tyr His Cys Phe Gly  
 50 55 60  
 Cys Gly Ala His Gly Asp Ala Ile Gly Phe Leu Met Gln His Leu Gly  
 65 70 75 80  
 Tyr Ser Phe Thr Glu Ala Ile Leu Val Leu Ser Lys Lys Phe Gln Val  
 85 90 95  
 Asp Leu Val Leu Gln Pro Lys Asp Ser Gly Tyr Thr Pro Pro Gln Gly  
 100 105 110  
 Leu Lys Glu Glu Leu Arg His Ile Asn Ser Glu Ala Glu Thr Phe Phe  
 115 120 125  
 Arg Tyr Cys Leu Tyr His Leu Pro Glu Ala Arg His Ala Leu Gln Tyr  
 130 135 140  
 Leu Tyr His Arg Gly Phe Ser Pro Asp Thr Ile Asp Arg Phe His Leu  
 145 150 155 160  
 Gly Tyr Gly Pro Glu Gln Ser Leu Phe Leu Gln Ala Met Glu Glu Arg  
 165 170 175  
 Lys Ile Ser Gln Glu Gln Leu His Thr Ala Gly Phe Phe Gly Asn Lys  
 180 185 190  
 Trp Phe Leu Phe Ala Arg Arg Ile Ser Phe Leu Ser Thr Met Arg  
 195 200 205  
 <210>1015  
 <211>402  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1015

Met Val Phe Val Cys Thr Lys Asn Leu Phe Pro Val His Asp Ala Leu  
 1 5 10 15  
 Gly His Thr Ile Gly Phe Ser Ala Arg Lys Phe Leu Glu Asn Ser Gln  
 20 25 30  
 Gly Gly Lys Tyr Val Asn Thr Pro Glu Thr Pro Ile Phe Lys Lys Ser  
 35 40 45  
 Arg Ile Leu Phe Gly Leu Asn Phe Ser Arg Arg Arg Ile Ala Lys Glu  
 50 55 60  
 Xaa Lys Val Ile Leu Val Glu Gly Gln Ala Asp Cys Leu Gln Met Ile  
 65 70 75 80  
 Asp Ser Gly Phe Asn Cys Thr Val Ala Ala Gln Gly Thr Ala Phe Thr  
 85 90 95  
 Glu Glu His Val Lys Glu Leu Ser Lys Leu Gly Val Leu Lys Val Phe  
 100 105 110  
 Leu Leu Phe Asp Ser Asp Glu Ala Gly Asn Lys Ala Ala Leu Arg Val  
 115 120 125  
 Gly Asp Leu Cys Gln Thr Ala Gln Met Ser Val Phe Val Cys Lys Leu  
 130 135 140  
 Pro Gln Gly His Asp Pro Asp Ser Phe Leu Met Gln Arg Gly Ser Ser  
 145 150 155 160  
 Gly Leu Ile Ala Leu Leu Glu Gln Ser Gln Asp Tyr Leu Thr Phe Leu  
 165 170 175  
 Ile Ser Glu Lys Met Ser Ser Tyr Pro Lys Phe Gly Pro Arg Glu Lys  
 180 185 190  
 Ala Leu Leu Val Glu Glu Ala Ile Arg Gln Ile Lys His Trp Gly Ser  
 195 200 205  
 Pro Ile Leu Val Tyr Glu His Leu Lys Gln Leu Ala Ser Leu Met Met  
 210 215 220  
 Val Pro Glu Asp Met Val Leu Ser Leu Ala Asn Pro Gln Val Thr Ala  
 225 230 235 240  
 Glu Pro Gln Asn Ile Pro Ile Lys Gln Lys Val Pro Lys Ile His Pro  
 245 250 255  
 His Ile Val Met Glu Thr Asp Ile Leu Arg Cys Met Leu Phe Cys Gly

260	265
Ser Asn Thr Lys Ile Leu Tyr Thr Ala Gln Phe Tyr Phe Val Pro Glu	
275	280
Asp Phe Lys His Pro Glu Cys Arg Lys Leu Phe Ala Phe Met Ile Ser	285
290	295
Tyr Tyr Glu Lys Tyr Arg Lys Asn Val Pro Phe Asp Glu Ala Cys Gln	300
305	310
Val Leu Ser Asp Ser Gln Ile Leu Gln Leu Leu Thr Lys Arg Arg Leu	315
325	330
Asn Thr Glu Ala Leu Asp Thr Ile Phe Val Gln Ser Leu Gln Lys Met	335
340	345
Ala Asp Arg Arg Trp Arg Glu Gln Cys Lys Pro Leu Ser Leu Asn Gln	350
355	360
Asn Ile Gln Asp Lys Lys Leu Glu Ile Leu Glu Asp Tyr Val Gln Leu	365
370	375
Arg Lys Asp Arg Thr Ile Ile Thr Leu Leu Asp Pro Glu Ser Glu Leu	380
385	390
Ile Pro	395
	400

&lt;210&gt;1016

&lt;211&gt;120

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1016

Ile Lys Ile Met Met His Arg Tyr Phe Ile Pro Leu Leu Ala Leu Leu			
1	5	10	15
Ile Phe Ser Pro Ser Leu Val Arg Ala Glu Leu Gln Pro Ser Glu Asn			
20	25	30	
Arg Lys Gly Gly Trp Pro Thr Gln Leu Ser Cys Ala Glu Gly Ser Gln			
35	40	45	
Leu Phe Cys Lys Phe Glu Ala Ala Tyr Asn Asn Ala Ile Glu Glu Gly			
50	55	60	
Lys Pro Gly Ile Leu Val Phe Phe Ser Glu Arg Pro Thr Pro Glu Phe			
65	70	75	80
Ala Asp Leu Thr Asn Gly Ser Phe Ser Leu Ser Thr Pro Ile Ala Lys			
85	90	95	
Gly Phe Asn Val Val Val Leu Cys Pro Gly Leu Ile Ser Pro Leu Asp			
100	105	110	
Phe Phe His Gln Asn Gly Ile Leu			
115	120		

&lt;210&gt;1017

&lt;211&gt;220

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1017

Ser Ile Phe Lys Asn Lys Ile Leu Pro Ser Tyr Phe Gly His Asn Phe			
1	5	10	15
Asp Gln Leu Arg Arg His Tyr Met Arg Ile Ala Leu Ser Leu Leu Ser			
20	25	30	
Leu Leu Met Ile Phe Pro Ile Phe Gly Glu Glu Ser Arg Pro Gly Ser			
35	40	45	
Glu Asp Gly Asn Ser Asn Thr Gln Glu Ile Val Gly Ser Gln Asp Thr			
50	55	60	
Gln Val Cys Leu Tyr His Ser Tyr Glu Gln Gly Leu Gln Ala Ser Arg			
65	70	75	80
Ile Glu Gly Lys Pro Leu Val Ile Val Val Leu Cys Asn Ser Gly Asp			
85	90	95	
Asp Gly Gln Ala Cys Thr Ile Gly Leu Ser Glu Thr Cys Glu Glu Val			
100	105	110	
Leu Ser Val Leu Ser Gly Ser Ile Phe Ser Glu Leu Ala Asn Phe Val			
115	120	125	
Val Leu Val Pro Ser Gly Val Asn Pro Leu Ile Tyr Pro Pro Ile Glu			
130	135	140	
Asp Pro Ile Leu Ala Glu Ile Val Lys Phe Lys Glu Leu Phe Lys Asp			

145	150	155	160
Glu Ser Phe Pro Thr Gly Leu Ser Ile Ile Val Val Gly Val Thr Pro			
165	170	175	
Glu Gly Pro Gly Asp Ile Ile Glu Val Ser Pro Val Ser Leu Thr Val			
180	185	190	
Glu Glu Glu Thr Leu Pro Ser Glu Gln Thr Thr Glu Val Glu Ser			
195	200	205	
Thr Ser Glu Leu Gln Ser Glu Asp Pro Ala Ile Ala			
210	215	220	
<210>1018			
<211>1014			
<212>PRT			
<213>Chlamydia pneumoniae			
<400>1018			
Leu Glu Ser Phe Val Ser Glu His Pro Leu Thr Leu Gln Ser Met Ile			
1	5	10	15
Ala Thr Ile Leu Arg Phe Trp Ser Glu Gln Gly Cys Val Ile His Gln			
20	25	30	
Gly Tyr Asp Leu Glu Val Gly Ala Gly Thr Phe Asn Pro Ala Thr Phe			
35	40	45	
Leu Arg Ala Leu Gly Pro Glu Pro Tyr Lys Ala Ala Tyr Val Glu Pro			
50	55	60	
Ser Arg Arg Pro Gln Asp Gly Arg Tyr Gly Val His Pro Asn Arg Leu			
65	70	75	80
Gln Asn Tyr His Gln Leu Gln Val Ile Leu Lys Pro Val Pro Glu Asn			
85	90	95	
Phe Leu Ser Leu Tyr Thr Glu Ser Leu Arg Ala Ile Gly Leu Asp Leu			
100	105	110	
Arg Asp His Asp Ile Arg Phe Ile His Asp Asp Trp Glu Asn Pro Thr			
115	120	125	
Ile Gly Ala Trp Gly Leu Gly Trp Glu Val Trp Leu Asn Gly Met Glu			
130	135	140	
Ile Thr Gln Leu Thr Tyr Phe Gln Ala Ile Gly Ser Lys Pro Leu Asp			
145	150	155	160
Thr Ile Ser Gly Glu Ile Thr Tyr Gly Ile Glu Arg Ile Ala Met Tyr			
165	170	175	
Leu Gln Lys Lys Thr Ser Ile Tyr Asp Val Leu Trp Asn Asp Thr Leu			
180	185	190	
Thr Tyr Gly Gln Ile Thr Gln Ala Ser Glu Lys Ala Trp Ser Glu Tyr			
195	200	205	
Asn Phe Asp Tyr Ala Asn Thr Glu Met Trp Phe Lys His Phe Glu Asp			
210	215	220	
Phe Ala Glu Glu Ala Leu Arg Thr Leu Lys Asn Gly Leu Ser Val Pro			
225	230	235	240
Ala Tyr Asp Phe Val Ile Lys Ala Ser His Ala Phe Asn Ile Leu Asp			
245	250	255	
Ala Arg Gly Thr Ile Ser Val Thr Glu Arg Thr Arg Tyr Ile Ala Arg			
260	265	270	
Ile Arg Gln Leu Thr Arg Leu Val Ala Asp Ser Tyr Val Glu Trp Arg			
275	280	285	
Ala Ser Leu Asn Tyr Pro Leu Leu Ser Leu Ser Ser Thr Ser Glu Pro			
290	295	300	
Lys Glu Thr Ser Glu Ser Val Val Pro Met Ile Ser Ser Thr Glu Asp			
305	310	315	320
Leu Leu Leu Glu Ile Gly Ser Glu Glu Leu Pro Ala Thr Phe Val Pro			
325	330	335	
Ile Gly Ile Gln Gln Leu Glu Ser Leu Ala Arg Gln Val Leu Thr Asp			
340	345	350	
His Asn Ile Val Tyr Glu Gly Leu Glu Val Leu Gly Ser Pro Arg Arg			
355	360	365	
Leu Ala Leu Leu Val Lys Asn Val Ala Pro Glu Val Val Gln Lys Ala			
370	375	380	
Phe Glu Lys Lys Gly Pro Met Leu Thr Ser Leu Phe Ser Pro Asp Gly			
385	390	395	400

Asp Val Ser Pro Gln Ile Gln Gln Phe Phe Ala Ser Gln Ile Val Asp  
 405 410 415  
 Ile Ser His Tyr Gln Asp Leu Ser Arg His Ala Ser Leu Ala Ile Arg  
 420 425 430  
 Thr Val Asn Gly Ser Glu Tyr Leu Phe Leu Leu His Pro Glu Ile Arg  
 435 440 445  
 Leu Arg Thr Ala Asp Ile Leu Met Gln Glu Leu Pro Leu Leu Ile Gln  
 450 455 460  
 Arg Met Lys Phe Pro Lys Lys Met Val Trp Asp Asn Ser Gly Val Glu  
 465 470 475 480  
 Tyr Ala Arg Pro Ile Arg Trp Leu Val Ala Leu Tyr Gly Glu His Ile  
 485 490 495  
 Leu Pro Ile Thr Leu Gly Thr Ile Ile Ala Ser Arg Asn Ser Phe Gly  
 500 505 510  
 His Arg Gln Leu Asp Pro Arg Lys Ile Ser Ile Ser Ser Pro Gln Asp  
 515 520 525  
 Tyr Val Glu Thr Leu Arg Gln Ala Cys Val Val Val Ser Gln Lys Glu  
 530 535 540  
 Arg Arg Met Ile Ile Glu Gln Gly Leu Arg Ala His Ser Ser Asp Thr  
 545 550 555 560  
 Ile Ser Ala Ile Pro Leu Pro Arg Leu Ile Glu Glu Ala Thr Phe Leu  
 565 570 575  
 Ser Glu His Pro Phe Val Ser Cys Gly Gln Phe Ser Glu Gln Phe Cys  
 580 585 590  
 Ala Leu Pro Lys Glu Leu Leu Ile Ala Glu Met Val Asn His Gln Lys  
 595 600 605  
 Tyr Phe Pro Thr His Glu Thr Ser Ser Gly Ala Ile Ser Asn Phe Phe  
 610 615 620  
 Ile Val Val Cys Asp Asn Ser Pro Asn Asp Thr Ile Ile Glu Gly Asn  
 625 630 635 640  
 Glu Lys Ala Leu Thr Pro Arg Leu Thr Asp Gly Glu Phe Leu Phe Lys  
 645 650 655  
 Gln Asp Leu Gln Thr Pro Leu Thr Thr Phe Ile Glu Lys Leu Lys Ser  
 660 665 670  
 Val Thr Tyr Phe Glu Ala Leu Gly Ser Leu Tyr Asp Lys Val Glu Arg  
 675 680 685  
 Leu Lys Ala His Gln Arg Val Phe Ser Thr Phe Ser Ser Leu Ala Ala  
 690 695 700  
 Ser Glu Asp Leu Asp Ile Ala Ile Gln Tyr Cys Lys Ala Asp Leu Val  
 705 710 715 720  
 Ser Ala Val Val Asn Glu Phe Pro Glu Leu Gln Gly Ile Met Gly Glu  
 725 730 735  
 Tyr Tyr Leu Lys His Ala Asn Leu Pro Thr Ala Ser Ala Val Ala Val  
 740 745 750  
 Gly Glu His Leu Arg His Ile Thr Met Gly Gln Lys Leu Ser Thr Ile  
 755 760 765  
 Gly Thr Leu Leu Ser Leu Leu Asp Arg Leu Asp Asn Leu Leu Ala Cys  
 770 775 780  
 Phe Ile Leu Gly Leu Lys Pro Thr Ser Ser His Asp Pro Tyr Ala Leu  
 785 790 795 800  
 Arg Arg Gln Ser Leu Glu Val Leu Thr Leu Val Ser Ala Ser Arg Leu  
 805 810 815  
 Pro Ile Asp Leu Ala Ser Leu Leu Asp Arg Leu Ala Asp His Phe Pro  
 820 825 830  
 Ser Thr Ile Glu Glu Lys Val Trp Asp Lys Ser Lys Thr Ile His Glu  
 835 840 845  
 Ile Leu Glu Phe Ile Trp Gly Arg Leu Lys Thr Phe Met Gly Ser Leu  
 850 855 860  
 Glu Phe Arg Lys Asp Glu Ile Ala Ala Val Leu Ile Asp Ser Ala Thr  
 865 870 875 880  
 Xaa Asn Pro Ile Glu Ile Leu Asp Thr Ala Glu Ala Leu Gln Leu Leu  
 885 890 895  
 Lys Glu Glu His Thr Glu Lys Leu Ala Val Ile Thr Thr His Asn  
 900 905 910

Arg Leu Lys Lys Ile Leu Ser Ser Leu Lys Leu Ser Met Thr Ser Ser  
 915 920 925  
 Pro Ile Glu Val Leu Gly Asp Arg Glu Ser Asn Phe Lys Gln Val Leu  
 930 935 940  
 Asp Ala Phe Pro Gly Phe Pro Lys Glu Thr Ser Ala His Ala Phe Leu  
 945 950 955 960  
 Glu Tyr Phe Leu Ser Leu Ala Asp Leu Ser Asn Asp Ile Gln Asp Phe  
 965 970 975  
 Leu Asn Thr Val His Ile Ala Asn Asp Asp Gly Ala Ile Arg Asn Leu  
 980 985 990  
 Arg Ile Ser Leu Leu Thr Ala Met Asp Lys Phe Ser Leu Cys His  
 995 1000 1005

Trp Glu Ser Val Ala Val  
 1010

<210>1019

<211>97

<212>PRT

<213>Chlamydia pneumoniae

<400>1019

Asn Gly Asn Asp Val Leu Lys Thr Cys Ser Leu Ile Leu Asn Leu  
 1 5 10 15  
 Cys Arg Tyr Phe Leu Leu Val Phe Cys Thr Ala Val Phe Phe Lys Arg  
 20 25 30  
 Tyr Ile Leu Ile Leu Thr Arg Thr Val Arg His Thr Glu Ile Tyr Ala  
 35 40 45  
 Cys Gly Glu Gly Val Thr Val Ala Leu Lys Ser Met Leu Pro Ser Met  
 50 55 60  
 Lys Gln Glu Ser Pro Ala Leu Ala Lys Glu Asn Val Lys Arg Lys Asn  
 65 70 75 80  
 Val Ile Pro Trp Ser His Leu Cys Gln Asn Ile Pro Ser Pro Tyr Ser  
 85 90 95

Leu

<210>1020

<211>207

<212>PRT

<213>Chlamydia pneumoniae

<400>1020

Arg Val Gly Leu Pro Asn Tyr Ile Thr Phe Ser Arg Leu Phe Ile Thr  
 1 5 10 15  
 Pro Ile Phe Met Ile Leu Tyr Leu Lys Gly Lys Trp Phe Gly Ile Thr  
 20 25 30  
 Pro Val Val Leu Pro Tyr Val Leu Leu Ala Leu Leu Ala Ile Ser Glu  
 35 40 45  
 Leu Thr Asp Ala Ile Asp Gly Tyr Val Ala Arg Lys Phe Ser Gln Val  
 50 55 60  
 Thr Asp Leu Gly Lys Leu Leu Asp Pro Met Ala Asp Ser Ile Tyr Arg  
 65 70 75 80  
 Ile Ser Ile Tyr Leu Thr Phe Thr Gln Pro Pro Val Asn Leu Pro Leu  
 85 90 95  
 Leu Leu Val Phe Ile Phe Leu Ala Arg Asp Ser Val Ile Ser Thr Leu  
 100 105 110  
 Arg Thr Val Cys Ala Phe Arg Gly Arg Val Val Ala Ala Arg Ala Ser  
 115 120 125  
 Gly Lys Leu Lys Ala Ile Leu Gln Gly Val Ser Phe Phe Leu Ile Leu  
 130 135 140  
 Leu Val Met Ile Pro His Ser Leu Gly Leu Leu Ser Gln Asn Gly Leu  
 145 150 155 160  
 Glu Ile Phe Ala Ser Val Thr Val Ser Ile Ile Ala Val Tyr Ser Ile  
 165 170 175  
 Ala Ser Gly Ile Glu Tyr Phe Trp Met Asn Lys Asn Phe Leu Ser Gln  
 180 185 190  
 Arg Ala Lys Thr Lys Asp Ser Glu Lys Asn His Glu Ser Lys Asp  
 195 200 205

<210>1021  
 <211>476  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1021  
 Met Arg Ile Val Gln Val Ala Val Glu Phe Thr Pro Ile Val Lys Val  
 1 5 10 15  
 Gly Gly Leu Gly Asp Ala Val Ala Ser Leu Ser Lys Glu Leu Ala Lys  
 20 25 30  
 Gln Asn Asp Val Glu Val Leu Leu Pro His Tyr Pro Leu Ile Ser Lys  
 35 40 45  
 Phe Ser Ser Ser Gln Val Leu Ser Glu Arg Ser Phe Tyr Tyr Glu Phe  
 50 55 60  
 Leu Gly Lys Gln Gln Ala Ser Ala Ile Ser Tyr Ser Tyr Glu Gly Leu  
 65 70 75 80  
 Thr Leu Thr Ile Ile Thr Leu Asp Ser Gln Ile Glu Leu Phe Ser Thr  
 85 90 95  
 Thr Ser Val Tyr Ser Glu Asn Asn Val Val Arg Phe Ser Ala Phe Ala  
 100 105 110  
 Ala Ala Ala Ala Ala Tyr Leu Gln Glu Ala Asp Pro Ala Asp Ile Val  
 115 120 125  
 His Leu His Asp Trp His Val Gly Leu Leu Ala Gly Leu Leu Lys Asn  
 130 135 140  
 Pro Leu Asn Pro Val His Ser Lys Ile Val Phe Thr Ile His Asn Phe  
 145 150 155 160  
 Gly Tyr Arg Gly Tyr Cys Ser Thr Gln Leu Leu Ala Ala Ser Gln Ile  
 165 170 175  
 Asp Asp Phe His Leu Ser His Tyr Gln Leu Phe Arg Asp Pro Gln Thr  
 180 185 190  
 Ser Val Leu Met Lys Gly Ala Leu Tyr Cys Ser Asp Tyr Ile Thr Thr  
 195 200 205  
 Val Ser Leu Thr Tyr Val Gln Glu Ile Ile Asn Asp Tyr Ser Asp Tyr  
 210 215 220  
 Glu Leu His Asp Ala Ile Leu Ala Arg Asn Ser Val Phe Ser Gly Ile  
 225 230 235 240  
 Ile Asn Gly Ile Asp Glu Asp Val Trp Asn Pro Lys Thr Asp Pro Ala  
 245 250 255  
 Leu Ala Val Gln Tyr Asp Ala Ser Leu Leu Ser Glu Pro Asp Val Leu  
 260 265 270  
 Phe Thr Lys Lys Glu Glu Asn Arg Ala Val Leu Tyr Glu Lys Leu Gly  
 275 280 285  
 Ile Ser Ser Asp Tyr Phe Pro Leu Ile Cys Val Ile Ser Arg Ile Val  
 290 295 300  
 Glu Glu Lys Gly Pro Glu Phe Met Lys Glu Ile Ile Leu His Ala Met  
 305 310 315 320  
 Glu His Ser Tyr Ala Phe Ile Leu Ile Gly Thr Ser Gln Asn Glu Val  
 325 330 335  
 Leu Leu Asn Glu Phe Arg Asn Leu Gln Asp Cys Leu Ala Ser Ser Pro  
 340 345 350  
 Asn Ile Arg Leu Ile Leu Asp Phe Asn Asp Pro Leu Ala Arg Leu Thr  
 355 360 365  
 Tyr Ala Ala Ala Asp Met Ile Cys Ile Pro Ser His Arg Glu Ala Cys  
 370 375 380  
 Gly Leu Thr Gln Leu Ile Ala Met Arg Tyr Gly Thr Val Pro Leu Val  
 385 390 395 400  
 Arg Lys Thr Gly Gly Leu Ala Asp Thr Val Ile Pro Gly Val Asn Gly  
 405 410 415  
 Phe Thr Phe Phe Asp Thr Asn Asn Phe Asn Glu Phe Arg Ala Met Leu  
 420 425 430  
 Ser Asn Ala Val Thr Thr Tyr Arg Gln Glu Pro Asp Val Trp Leu Asn  
 435 440 445  
 Leu Ile Glu Ser Gly Met Leu Arg Ala Ser Gly Leu Asp Ala Met Ala  
 450 455 460  
 Lys His Tyr Val Asn Leu Tyr Gln Ser Leu Leu Ser

465	70	475
<210>1022		
<211>185		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1022		
Met Glu Leu Val Val Thr Ser Arg Glu Thr Gly Lys Lys Ser Phe Leu		
1 5 10 15		
Lys Lys Ile Arg Gln Gln Gly Gly Ile Pro Ala Val Val Tyr Ser Ala		
20 25 30		
Gly Lys Ser Leu Ala Asn Ile Thr Val Asp Ala Leu Val Phe Lys Lys		
35 40 45		
Phe Leu Ser Asn Leu Glu Ser Gly Ala Leu Ser Ser Thr Val Phe Ser		
50 55 60		
Leu Ser Tyr Glu Gly Arg Ile Ile Lys Ala Leu Val Lys Asp Ile Gln		
65 70 75 80		
Tyr Gln Ile Thr Tyr Asp Val Ile His Leu Asp Phe Glu Glu Leu		
85 90 95		
Val Glu Asp Arg Pro Val Lys Leu Asn Ile Pro Ile Arg Cys Ile Asn		
100 105 110		
Ala Val Asp Cys Ile Gly Val Lys Leu Gly Gly Ser Leu Arg Gln Val		
115 120 125		
Ile Arg Ala Val Arg Val Val Cys Lys Pro Lys Asp Ile Val Pro Phe		
130 135 140		
Leu Glu Leu Asp Val Arg Ser Val Gly Leu Ser Gln Thr Arg Lys Leu		
145 150 155 160		
Ser Asp Ile Lys Ile Pro Ala Gly Ile Glu Thr Ile Thr Pro Leu Lys		
165 170 175		
Glu Val Ala Ile Thr Val Ser Arg Arg		
180 185		
<210>1023		
<211>150		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1023		
Met Ala Lys Leu Ile Val Ala Ile Gly Asn Pro Arg His Gly Tyr Ala		
1 5 10 15		
Asn Thr Arg His Asn Ala Gly Phe Leu Leu Ala Asp Arg Leu Val Glu		
20 25 30		
Glu Leu Gln Gly Pro Pro Phe Lys Pro Leu Ser Lys Cys His Ala Leu		
35 40 45		
Met Thr Leu Val Glu Ser Ser Gly Pro Leu Val Phe Ile Lys Pro		
50 55 60		
Thr Thr Phe Val Asn Leu Ser Gly Lys Ala Val Val Leu Ala Lys Lys		
65 70 75 80		
Tyr Phe Asn Val Ala Leu Ser His Ile Leu Val Leu Ala Asp Asp Val		
85 90 95		
Asn Arg Ser Phe Gly Lys Leu Arg Leu Cys Phe Asn Gly Gly Ser Gly		
100 105 110		
Gly His Asn Gly Leu Lys Ser Ile Thr Ala Ser Leu Gly Ser Asn Glu		
115 120 125		
Tyr Trp Gln Leu Arg Phe Gly Val Gly Arg Pro Leu Glu Glu Val Leu		
130 135 140		
Ser Tyr Leu Ile Ser Phe		
145 150		
<210>1024		
<211>112		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1024		
Met Gly Lys Lys Glu Asn Gln Leu Tyr Glu Gly Ala Tyr Val Phe Ser		
1 5 10 15		
Val Thr Leu Ser Glu Glu Ala Arg Arg Lys Ala Leu Asp Lys Val Ile		
20 25 30		

Ser Gly Ile Thr Asn Tyr Gly Gly Glu Ile His Lys Ile His Asp Gln  
                   35                  40                  45  
 Gly Arg Lys Lys Leu Ala Tyr Thr Ile Arg Gly Ala Arg Glu Gly Tyr  
                   50                  55                  60  
 Tyr Tyr Phe Ile Tyr Phe Ser Val Ser Pro Gly Ala Ile Thr Glu Leu  
                   65                  70                  75                  80  
 Trp Lys Glu Tyr His Leu Asn Glu Asp Leu Leu Arg Phe Met Thr Leu  
                   85                  90                  95  
 Arg Ala Asp Ser Val Lys Glu Val Leu Glu Phe Ala Ser Leu Pro Glu  
                   100                105                  110

&lt;210&gt;1025

&lt;211&gt;82

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1025

Met Asn Lys Pro Val His Asn Asn Glu His Arg Arg Lys Arg Phe Asn  
        1                  5                  10                  15  
 Lys Lys Cys Pro Phe Val Ser Ala Gly Trp Lys Thr Ile Asp Tyr Lys  
        20                  25                  30  
 Asp Val Glu Thr Leu Lys Lys Phe Ile Thr Glu Arg Gly Lys Val Leu  
        35                  40                  45  
 Pro Arg Arg Ile Thr Gly Val Ser Ser Arg Phe Gln Gly Val Leu Ser  
        50                  55                  60  
 Gln Ala Ile Lys Arg Ala Arg His Leu Gly Leu Leu Pro Phe Val Gly  
        65                  70                  75                  80  
 Glu Asp

&lt;210&gt;1026

&lt;211&gt;169

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1026

Met Lys Gln Gln Leu Leu Leu Glu Asp Val Asp Gly Leu Gly Arg  
        1                  5                  10                  15  
 Ser Gly Asp Leu Ile Thr Ala Arg Pro Gly Tyr Val Arg Asn Tyr Leu  
        20                  25                  30  
 Ile Pro Lys Lys Ala Val Ile Ala Gly Ala Gly Thr Leu Arg Leu  
        35                  40                  45  
 Gln Ala Lys Leu Lys Glu Gln Arg Leu Ile Gln Ala Ala Ala Asp Lys  
        50                  55                  60  
 Ala Asp Ser Glu Arg Ile Ala Gln Ala Leu Lys Asp Ile Val Leu Glu  
        65                  70                  75                  80  
 Phe Gln Val Arg Val Asp Pro Asp Asn Asn Met Tyr Gly Ser Val Thr  
        85                  90                  95  
 Ile Ala Asp Ile Ile Ala Glu Ala Ala Lys Lys Asn Ile Phe Leu Val  
        100                105                  110  
 Arg Lys Asn Phe Pro His Ala His Tyr Ala Ile Lys Asn Leu Gly Lys  
        115                120                  125  
 Lys Asn Ile Pro Leu Lys Leu Lys Glu Glu Val Thr Ala Thr Leu Leu  
        130                135                  140  
 Val Glu Val Thr Ser Asp Asn Glu Tyr Val Thr Val Leu Ala Gln Gly  
        145                150                  155                  160  
 Lys Gln Thr Glu Glu Asn Gln Glu Gly  
        165

&lt;210&gt;1027

&lt;211&gt;81

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1027

Val Gly Arg Glu Cys Glu Gly Leu Phe Met Ser Tyr Lys Ile Thr Leu  
        1                  5                  10                  15  
 Pro Lys Ala Asp Glu Thr Thr Ala Lys Lys Val Thr Lys Ile Ser Glu  
        20                  25                  30  
 Ala Ser Thr Leu Ile Phe Ser Val Leu Lys Glu Lys Ala Ser Leu Gly

35	40	45
Asn Val His Gly Phe Cys Gln Ala Glu Asn Ser Leu Ser Val Glu Ala		
50	55	60
Asn Lys Ile Ile Ser Val Ala Glu Asn Thr Leu Ala Gly Cys Phe Cys		
65	70	75
Lys		

&lt;210&gt;1028

&lt;211&gt;455

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1028

Leu Val Trp Phe Ser Met Ile Leu Pro Pro Tyr Ser Tyr Ser Leu Lys			
1	5	10	15
Ile Gly Ala Ala Val Leu Phe Phe Cys Ser Ile Leu His Thr Phe Leu			
20	25	30	
Thr Pro Trp Leu Tyr Thr Leu Cys Gln Ser Tyr Glu His Lys Lys Leu			
35	40	45	
Val Phe Pro Glu Cys Trp Lys Arg Tyr Ala Arg Leu Ser Glu Leu Phe			
50	55	60	
Arg Ile Leu Ser Arg Val Glu Ile Val Phe Phe Leu Trp Ala Val Pro			
65	70	75	80
Leu Phe Phe Trp Phe Leu Tyr Thr Glu Gly Tyr Arg Ile Ser Met Ala			
85	90	95	
Tyr Phe Asn Ser Arg Asn Tyr Gly Phe Ala Val Phe Ile Met Val Ile			
100	105	110	
Leu Ile Leu Leu Glu Ser Arg Pro Ile Val Tyr Phe Ala Glu Leu Val			
115	120	125	
Leu Ser Ser Ile Ala Lys Leu Gly Lys Thr Ser Pro Lys Ser Trp Trp			
130	135	140	
Trp Thr Leu Met Ile Ala Pro Pro Leu Leu Ser Cys Leu Leu Lys Glu			
145	150	155	160
Thr Gly Ala Met Ile Ile Gly Ala Thr Leu Leu Met Arg His Phe Tyr			
165	170	175	
Val Phe Thr Pro Ser Arg Arg Phe Ala Tyr Ala Thr Ile Gly Leu Leu			
180	185	190	
Phe Ser Asn Ile Ser Ile Gly Gly Leu Thr Ser Tyr Val Ser Ser Arg			
195	200	205	
Ala Leu Phe Leu Ile Phe Pro Ala Leu Lys Trp Glu His Ser Phe Phe			
210	215	220	
Leu Ser His Phe Ala Trp Lys Ala Ile Val Ala Ile Leu Ile Ser Thr			
225	230	235	240
Thr Ile Tyr Tyr Phe Ile Phe Arg Lys Glu Phe Lys Lys Phe Pro Asp			
245	250	255	
Ile Pro Ser Asp Asp Pro Ser Val Glu Lys Val Pro Trp Trp Ile			
260	265	270	
Ile Cys Val Asn Ile Ile Phe Val Gly Ser Ile Ile Leu Ser Arg Ser			
275	280	285	
Thr Pro Leu Phe Met Gly Ala Leu Leu Leu Phe Tyr Leu Gly Phe Gln			
290	295	300	
Lys Phe Thr Ile Phe Tyr Gln Asp Pro Ile Asn Leu Ser Lys Val Cys			
305	310	315	320
Tyr Val Gly Leu Phe Tyr Ala Gly Leu Val Val Phe Gly Asp Leu Gln			
325	330	335	
Glu Trp Trp Val Leu Asn Leu Met Gln Gly Leu Ser Asp Phe Gly Tyr			
340	345	350	
Met Thr Val Ser Tyr Thr Leu Ser Ile Phe Leu Asp Asn Ala Leu Val			
355	360	365	
Asn Tyr Leu Val His Asn Leu Ser Val Ala Thr Asp Cys Tyr His Tyr			
370	375	380	
Leu Val Val Ala Gly Cys Met Ala Ala Gly Gly Leu Thr Leu Val Ser			
385	390	395	400
Asn Ile Pro Asn Ile Val Gly Tyr Leu Ile Leu Arg Ser Ala Phe Pro			
405	410	415	

Ser Ser Thr Ile His Met Gly Trp Leu Phe Leu Gly Ala Leu Gly Pro  
                   420                  425                  430  
 Ser Ile Ile Ser Leu Gly Val Phe Trp Leu Leu Lys Asn Val Pro Glu  
                   435                  440                  445  
 Phe Leu Tyr Cys Phe Phe Arg  
                   450                  455  
 <210>1029  
 <211>362  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1029  
 Pro Val Asn His Gln Leu Leu Arg Glu Tyr Tyr Pro Ala Thr Gln Ala  
       1                  5                  10                  15  
 Gly Phe Ser Phe Thr Ser Ala Leu Gly Gly Asp Gly Ile Asp Leu Arg  
       20                  25                  30  
 Val Ser Gly Tyr Thr Thr Val Pro Ala Leu Leu Asn Ser Ile Leu  
       35                  40                  45  
 Thr Ser Leu Pro Asn Leu Glu Ile Arg Tyr Glu Thr Phe Leu Val Tyr  
       50                  55                  60  
 Lys Lys Gln Leu Leu Glu Leu Tyr Gln Gly Ala Leu Leu Asn Cys Pro  
       65                  70                  75                  80  
 Val Arg Ser Gly Leu Asp Glu Leu Ala Ser Gln Val Met Lys Glu Thr  
       85                  90                  95  
 Tyr Ser Asn Thr Thr Lys Leu Ser Ala Leu Glu Lys Leu Ser Phe Ser  
       100                  105                  110  
 Glu Phe Gln Ala Phe Ala Ser Asn Leu Phe Asn Ser Val His Leu Glu  
       115                  120                  125  
 Val Met Val Leu Gly Asn Leu Ser Glu Gln Gln Lys Lys Asp Tyr Leu  
       130                  135                  140  
 Glu Met Leu Gln Val Phe Thr Ala Ser Arg Ser Ser His Ala Thr Lys  
       145                  150                  155                  160  
 Pro Phe Tyr Tyr Glu Leu Gln Ser Gln Glu Ile Ser Glu Ile His His  
       165                  170                  175  
 Asp Tyr Pro Leu Thr Ala Asn Gly Met Leu Leu Leu Gln Asp Lys  
       180                  185                  190  
 Ser Ser Pro Ser Ile Gln Gly Lys Val Cys Ala Glu Met Leu Phe Glu  
       195                  200                  205  
 Trp Leu His His Ile Thr Phe Glu Glu Leu Arg Thr Gln Gln Leu  
       210                  215                  220  
 Gly Tyr Met Val Gly Ala Arg Tyr Arg Glu Phe Ala Ser Arg Pro Phe  
       225                  230                  235                  240  
 Gly Phe Leu Tyr Ile Arg Ser Asp Ala Tyr Ser Pro Glu Glu Leu Leu  
       245                  250                  255  
 Ala Lys Thr Ser Leu Phe Leu Asn Lys Val Ser Ala Ser Pro Glu Lys  
       260                  265                  270  
 Phe Gly Ile Ser Gln Glu Lys Phe Ala Asn Ile Arg Lys Ala Tyr Ile  
       275                  280                  285  
 Asn Lys Ile Leu Glu Pro Glu His Ser Leu Asp Met Met Asn Ser Ala  
       290                  295                  300  
 Leu Phe Ser Leu Ala Phe Glu Arg Pro Phe Val Glu Phe Ser Thr Pro  
       305                  310                  315                  320  
 Asp Leu Lys Ile Ala Ile Ala Glu Thr Leu Thr Tyr Glu Glu Phe Leu  
       325                  330                  335  
 Lys Tyr Cys Gln Cys Phe Leu Ser Asn Glu Leu Gly Thr Gln Thr Ser  
       340                  345                  350  
 Val Tyr Ile Arg Gly Thr Gln Lys Thr Ser  
       355                  360  
 <210>1030  
 <211>945  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1030  
 Ile Tyr Arg Ala Ile Tyr Met Gln Phe Ser Arg Tyr Leu Arg Tyr Ala  
       1                  5                  10                  15

Phe Asp Asn Gln Tyr Leu Pro Glu Pro Leu Tyr Gln Lys Phe Ser Val  
                   20                 25                 30

Phe His Gln Asn Tyr Ile Asp Ala Ala Thr Lys Lys Ala Ala Ala Asp  
                   35                 40                 45

Gln Ala Glu Val Leu Cys Leu Gln Trp Val Lys Val Ile Ile Glu Asp  
                   50                 55                 60

Leu Lys Asn Pro Phe Ile Phe Pro Pro Tyr His Lys Lys Ile Arg Ala  
                   65                 70                 75                 80

Pro Ile Asp Leu Phe Arg Leu Ser Ile Asp Phe Phe Ser Leu Val Ile  
                   85                 90                 95

Asp Asp Lys Asn Ser Arg Ile Leu Asn Leu His Arg Leu Lys Glu Ile  
                   100                105                110

Glu Glu Tyr Ile Ala Arg Gly Asp Asn Val Val Leu Leu Ala Asn His  
                   115                120                125

Gln Thr Glu Cys Asp Pro Gln Leu Met Tyr Tyr Ala Leu Gly Lys Thr  
                   130                135                140

His Pro Glu Leu Met Glu Asn Met Ile Phe Val Ala Gly Asp Arg Val  
                   145                150                155                160

Thr Ser Asp Pro Leu Ala Arg Pro Phe Ser Met Gly Cys Asp Leu Leu  
                   165                170                175

Cys Ile Tyr Ser Lys Arg His Ile Ala Thr Pro Pro Glu Leu Arg Glu  
                   180                185                190

Glu Lys Leu Leu His Asn Gln Lys Ser Met Gln Ile Leu Lys Thr Leu  
                   195                200                205

Leu Asn Glu Gly Gly Lys Phe Ile Tyr Val Ala Pro Ala Gly Gly Arg  
                   210                215                220

Asp Arg Lys Asn Ala Glu Gly Arg Leu Tyr Pro Ser Glu Phe Ser Pro  
                   225                230                235                240

Glu Ser Ile Glu Val Phe Arg Leu Leu Ala Lys Ala Ser Asn Gln Thr  
                   245                250                255

Thr His Phe Tyr Pro Phe Ala Leu Lys Thr Tyr Asp Ile Leu Pro Pro  
                   260                265                270

Pro Pro Lys Ile Glu Asn Ala Ile Gly Glu Gln Arg Ala Ile Phe Phe  
                   275                280                285

Ala Pro Val Phe Phe Asn Phe Gly Ala Glu Leu Phe Phe Asp Ala Leu  
                   290                295                300

Cys Ser Lys Glu Glu Leu Ile His Cys Asp Lys His Ala Gln Arg Thr  
                   305                310                315                320

Leu Arg Ala Glu Lys Val Phe Ser Ile Cys Lys Lys Ser Ile Arg Gly  
                   325                330                335

Ile Val Arg Cys Phe Gly Asn Phe Phe Val Pro Ile Leu Ile Cys Thr  
                   340                345                350

Ser Leu Ser Ile Thr Ser Cys Glu Gln Gln Phe Lys Val Val Pro Asn  
                   355                360                365

Gln Cys Pro Leu Gln Val Ser Thr Pro Ala Ala Ala Asp Gln Lys Ile  
                   370                375                380

Glu Lys Ile Ile Cys Ser Asn Gly Leu Pro Leu Leu Ile Ile Ser Asp  
                   385                390                395                400

Pro Asn Leu Pro Thr Ser Gly Ala Ala Leu Leu Val Lys Thr Gly Asn  
                   405                410                415

Asn Ala Asp Pro Glu Glu Tyr Pro Gly Met Ala His Phe Thr Glu His  
                   420                425                430

Cys Val Phe Leu Gly Asn Glu Lys Tyr Pro Glu Val Ser Gly Phe Pro  
                   435                440                445

Gly Phe Leu Ser Glu Asn Asn Gly Val His Asn Ala Phe Thr Tyr Pro  
                   450                455                460

Asn Lys Thr Val Phe Val Phe Ser Val Glu His Ser Ala Phe Ser Asp  
                   465                470                475                480

Ala Leu Asp Gln Phe Val His Leu Phe Ile Asn Pro Lys Phe Arg Gln  
                   485                490                495

Glu Asp Leu Asp Arg Glu Lys Tyr Ala Val His Gln Glu Phe Ala Ala  
                   500                505                510

His Pro Leu Ser Asp Gly Arg Arg Val His Arg Ile Gln Gln Leu Val  
                   515                520                525

Ala Pro Gln Gly His Pro Cys Ala Arg Phe Gly Cys Gln Asn Ala Ser  
 530 535 540  
 Thr Leu Thr Pro Val Thr Thr Glu Lys Met Ala Glu Trp Phe Lys Leu  
 545 550 555 560  
 His Tyr Ser Pro Glu Asn Met Cys Ala Ile Ala Tyr Thr Ser Ala Pro  
 565 570 575  
 Leu Ser Lys Ala Lys Lys Gln Phe Ser Lys Ile Phe Ser Gln Ile Pro  
 580 585 590  
 Arg Ser Lys Asn Tyr Glu Arg Gln Glu Pro Phe Leu Pro Ser Gly Asp  
 595 600 605  
 Thr Ser Ser Leu Lys Asn Leu Tyr Ile Asn Gln Ala Ile Gln Pro Thr  
 610 615 620  
 Ser Asn Leu Glu Ile Tyr Trp His Ile Tyr Glu Ser Ser His Pro Ile  
 625 630 635 640  
 Pro Leu Gly Cys Tyr Lys Ala Leu Ala Glu Val Leu Arg Asn Glu Ser  
 645 650 655  
 Lys Asn Ser Leu Val Ser Leu Leu Lys Asn Glu Gln Leu Ile Thr Asp  
 660 665 670  
 Leu Asp Val Glu Phe Phe Arg Ser Ser Leu Asn Thr Gly Glu Phe Tyr  
 675 680 685  
 Ile Ser Tyr Glu Leu Thr Glu Lys Gly Asp Lys His Tyr Ser Gln Val  
 690 695 700  
 Ile Asp Ser Thr Phe Gln Tyr Leu Arg Tyr Ile Gln Glu His Gly Ile  
 705 710 715 720  
 Pro Asn Tyr Thr Leu Glu Glu Ile Ser Thr Ile Asn Ala Leu Asn Tyr  
 725 730 735  
 Cys Tyr Ser Ser Lys Ser Pro Leu Phe Asp Leu Leu Cys Lys Gln Ile  
 740 745 750  
 Val Ser Leu Gly Asn Glu Asp Leu Ser Thr Tyr Pro Tyr His Ser Leu  
 755 760 765  
 Val Tyr Pro Lys Tyr Ser Ser Glu Asp Glu Ser Ala Leu Leu Asn Leu  
 770 775 780  
 Val Ser Asp Pro Glu Gln Ala Arg Phe Val Leu Ser Ser Lys Asn Ser  
 785 790 795 800  
 Glu His Trp Glu Glu Ala Thr Gln Leu His Asp Pro Ile Phe Asp Met  
 805 810 815  
 Thr Tyr Tyr Val Lys Ala Leu Asp Gly Val Gln Asp Tyr Gly Lys Val  
 820 825 830  
 Gln Ser Leu Lys Pro Ile Ala Leu Pro Lys Pro Asn Leu Phe Ile Pro  
 835 840 845  
 Lys Glu Val Thr Leu Pro Gly Val His Leu Leu Lys Lys Gln Glu Phe  
 850 855 860  
 Pro Phe Ala Pro Ala Leu Ser Tyr Gln Asp Asp Lys Leu Thr Leu Tyr  
 865 870 875 880  
 His Cys Glu Asp His Tyr Tyr Thr Ala Pro Lys Leu Ser Ser Gln Ile  
 885 890 895  
 Arg Ile Arg Ser Pro Gln Ile Ser Arg Ser Ser Pro Gln Phe Leu Val  
 900 905 910  
 Ala Thr Glu Leu Tyr Cys Leu Ala Cys Glu Pro Ser Ala Phe Glu Gly  
 915 920 925  
 Val Leu Ser Arg Asn Ala Ser Trp Phe Phe Phe Tyr Phe Cys Phe Arg  
 930 935 940

Trp  
945

<210>1031

<211>521

<212>PRT

<213>Chlamydia pneumoniae

<400>1031

Ile Gly Thr Arg Lys Val Met Glu Asn Glu Ile Leu Leu Asn Ile Glu  
1 5 10 15

Ser Lys Glu Ile Arg Tyr Ala His Leu Lys Asn Gly Gln Leu Phe Asp  
20 25 30

Leu Thr Ile Glu Arg Lys Lys Val Arg Gln Leu Lys Gly Asn Ile Tyr

35	40	45
Arg Gly Arg Val Thr Asn Ile Leu Arg Asn Ile Gln Ser Ala Phe Ile		
50	55	60
Asn Ile Asp Glu Arg Glu Asn Gly Phe Ile His Ile Ser Asp Ile Leu		
65	70	75
80		
Glu Asn Ser Lys Lys Phe Glu Gln Met Phe Asp Met Asp Val Asp Ala		
85	90	95
Leu Pro Glu Glu Ala Ser Glu Ala Pro Leu Leu Ser Ser Glu Glu Ala		
100	105	110
Pro Ile Glu Glu Phe Leu Lys Leu Asp Ser Pro Val Leu Val Gln Val		
115	120	125
Val Lys Glu Pro Ile Gly Ser Lys Gly Ala Arg Leu Thr Ser Asn Ile		
130	135	140
Ser Ile Pro Gly Arg Tyr Leu Val Leu Leu Pro Asn Ser Pro His Arg		
145	150	155
160		
Gly Val Ser Arg Lys Ile Glu Asp Pro His Met Arg Glu Gln Leu Lys		
165	170	175
Gln Leu Ile Arg Ser Phe Glu Met Pro Gln Asp Met Gly Leu Ile Cys		
180	185	190
Arg Thr Ala Ser Thr Thr Ala Ser Thr Glu Ala Leu Ile Asn Glu Ala		
195	200	205
His Asp Leu Leu Leu Thr Trp Lys Thr Ile Leu Glu Lys Phe Tyr Ser		
210	215	220
Thr Glu Gln Pro Cys Leu Leu Tyr Ser Glu Thr Asp Ile Leu Lys Lys		
225	230	235
240		
Ala Val Ile Thr Cys Ile Asp Lys Asn Tyr Lys Arg Leu Leu Ile Asp		
245	250	255
Asp Tyr Ala Thr Tyr Gln Lys Cys Lys His Met Leu Lys Lys Tyr Ser		
260	265	270
Pro Asp Ala Ser Ile Lys Ile Glu Tyr Tyr Arg Asp Ser Ile Pro Met		
275	280	285
Phe Glu Arg Phe Asn Ile Glu Lys Glu Ile Asp Lys Ala Thr Arg Arg		
290	295	300
Lys Ile Trp Leu Ser Ser Gly Gly Tyr Leu Phe Phe Asp Lys Thr Glu		
305	310	315
320		
Ala Met His Thr Ile Asp Val Asn Ser Gly Arg Ser Thr Gln Leu Glu		
325	330	335
Ser Gly Val Glu Glu Thr Leu Val Gln Ile Asn Leu Glu Ala Ala Glu		
340	345	350
Glu Ile Ala Arg Gln Leu Arg Leu Arg Asn Val Gly Gly Leu Val Ile		
355	360	365
Ile Asp Phe Ile Asp Met Lys Ser Arg Lys Asn Gln Arg Arg Val Leu		
370	375	380
Glu Arg Leu Lys Glu His Met Lys Tyr Asp Ala Ala Arg Cys Thr Ile		
385	390	395
400		
Leu Ser Met Ser Glu Phe Gly Leu Val Glu Met Thr Arg Gln Arg Asn		
405	410	415
Arg Glu Ser Leu Met Gln Thr Leu Phe Thr Leu Cys Pro Tyr Cys Ser		
420	425	430
Gly Asn Ala Ile Ile Lys Thr Pro Glu Ser Val Val Ile Glu Ile Glu		
435	440	445
Arg Asp Leu Lys Lys Val Ile Asn His Lys Glu His Ser His Leu Cys		
450	455	460
Leu Val Val His Pro Glu Ile Ala Ser Tyr Met Lys Gln Glu Asn Asp		
465	470	475
480		
Asp Asn Glu Met Ile Asn Leu Ala Lys Gln Leu Lys Ala Lys Leu Gln		
485	490	495
Ile Asn Thr Ser Asp Ser Val His Leu Asn His Tyr Gln Phe Phe Ser		
500	505	510
Leu Ile Thr Gly Glu Ser Ile Asp Leu		
515	520	

<210>1032  
<211>176  
<212>PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1032

Ser Leu Ser Leu Val Ser Tyr Leu Ser Asn Pro Gln Lys Ala Leu Val  
 1 5 10 15  
 Leu Gly Ser Lys Gly Phe Ser Met Asp Cys Val Asp Asn Leu Lys Leu  
 20 25 30  
 Tyr Ile Phe Arg Leu Lys Leu Pro Gly Asp Thr Glu Arg Ile Ser Tyr  
 35 40 45  
 Ser Ile Ser Pro Glu Tyr Ile Arg Glu Lys Gly Glu Glu Leu Leu  
 50 55 60  
 Asn Ser Pro Ile Glu Val Glu Gly Ser Leu Gly Arg Ile Asp Ser Asp  
 65 70 75 80  
 Gln Trp Ile Leu Ser Leu Ser Leu Lys Thr Gln Leu Gly Leu Cys Cys  
 85 90 95  
 Pro Val Cys Asn Asn Phe Ser His Ser Val Cys Leu Pro Asp Leu  
 100 105 110  
 Gln Arg Val Ile Ser His Asp Glu Val Gly Ser Gly Val Phe Asp Cys  
 115 120 125  
 Arg Pro Leu Ile Arg Gln Glu Leu Leu Leu Glu Ser Asp Cys Phe Glu  
 130 135 140  
 Glu Cys Ser Gly Gln Gly Cys Pro Glu Arg Lys Asn Ile Leu Lys Phe  
 145 150 155 160  
 Leu Glu Asp Arg Lys Lys His Glu Gly Asn Asn Pro Phe Glu Tyr Leu  
 165 170 175

&lt;210&gt;1033

&lt;211&gt;213

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1033

Met Glu Val Gln Ile Gly Ile Asp Leu Met Gly Asp His Ser Pro  
 1 5 10 15  
 Leu Val Val Trp Gln Val Leu Val Asp Val Leu Lys Ser Gln Ser Ser  
 20 25 30  
 Thr Ile Pro Phe Ala Phe Thr Leu Phe Ala Ser Glu Glu Ile Arg Lys  
 35 40 45  
 Gln Ile Gln Glu Glu Phe Ile Ser Asp Leu Pro Gln Glu Lys Phe Pro  
 50 55 60  
 Lys Ile Ile Ser Ala Glu Asn Phe Val Ala Met Glu Asp Ser Pro Leu  
 65 70 75 80  
 Ala Ala Ile Arg Lys Lys Ser Ser Met Ala Leu Gly Leu Asp Tyr  
 85 90 95  
 Leu Gln Glu Asp Lys Leu Asp Ala Phe Ile Ser Thr Gly Asn Thr Gly  
 100 105 110  
 Ala Leu Val Thr Leu Ala Arg Ala Lys Ile Pro Leu Phe Pro Ala Val  
 115 120 125  
 Ser Arg Pro Ala Leu Leu Val Cys Val Pro Thr Met Arg Gly His Ala  
 130 135 140  
 Val Ile Leu Asp Val Gly Ala Asn Ile Ser Val Lys Pro Glu Glu Met  
 145 150 155 160  
 Val Gly Phe Ala Arg Met Gly Leu Ala Tyr Arg Gln Cys Leu Gly Asp  
 165 170 175  
 Ser Lys Ile Pro Thr Ile Gly Leu Leu Asn Ile Gly Ser Glu Glu Arg  
 180 185 190  
 Lys Gly Thr Glu Ala His Arg Gln Thr Phe Arg Met Leu Arg Glu Thr  
 195 200 205  
 Phe Gly Glu Leu Ser  
 210

&lt;210&gt;1034

&lt;211&gt;127

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1034

Arg Tyr Gly Ser Pro Ser Pro Asp Ile Pro Tyr Ala Ala Arg Asp Ile  
 1 5 10 15

Trp Arg Thr Phe Leu Gly Asn Ile Glu Ser Gly Ala Val Phe Asp Gly  
     20                 25                 30  
 Ala Ala Asp Ile Val Val Thr Asp Gly Phe Thr Gly Asn Ile Phe Leu  
     35                 40                 45  
 Lys Thr Ala Glu Gly Val Phe Glu Phe Leu Gln Arg Ile Leu Gly Asp  
     50                 55                 60  
 Lys Leu Glu Ala Asp Ile Gln Arg Arg Leu Asp Tyr Thr Phe Tyr Pro  
     65                 70                 75                 80  
 Gly Ser Val Val Cys Gly Leu Ser Lys Leu Val Ile Lys Cys His Gly  
     85                 90                 95  
 Lys Ala Cys Gly Ser Ser Leu Phe His Gly Ile Leu Gly Ser Ile Asn  
     100                105                110  
 Leu Ala Gln Ala Arg Leu Cys Lys Arg Ile Leu Ser Asn Leu Ile  
     115                120                125  
 <210>1035  
 <211>1617  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1035  
 Thr Pro Leu Arg Phe Lys Val Ala Met Val Ala Lys Lys Thr Val Arg  
     1                 5                 10                 15  
 Ser Tyr Arg Ser Ser Phe Ser His Ser Val Ile Val Ala Ile Leu Ser  
     20                25                 30  
 Ala Gly Ile Ala Phe Glu Ala His Ser Leu His Ser Ser Glu Leu Asp  
     35                40                 45  
 Leu Gly Val Phe Asn Lys Gln Phe Glu Glu His Ser Ala His Val Glu  
     50                55                 60  
 Glu Ala Gln Thr Ser Val Leu Lys Gly Ser Asp Pro Val Asn Pro Ser  
     65                70                 75                 80  
 Gln Lys Glu Ser Glu Lys Val Leu Tyr Thr Gln Val Pro Leu Thr Gln  
     85                90                 95  
 Gly Ser Ser Gly Glu Ser Leu Asp Leu Ala Asp Ala Asn Xaa Leu Glu  
     100              105                110  
 His Phe Gln His Leu Phe Glu Glu Thr Thr Val Phe Gly Ile Asp Gln  
     115              120                125  
 Lys Leu Val Trp Ser Asp Leu Asp Thr Arg Asn Phe Ser Gln Pro Thr  
     130              135                140  
 Gln Glu Pro Asp Thr Ser Asn Ala Val Ser Glu Lys Ile Ser Ser Asp  
     145              150                155                160  
 Thr Lys Glu Asn Arg Lys Asp Leu Glu Thr Glu Asp Pro Ser Lys Lys  
     165              170                175  
 Ser Gly Leu Lys Glu Val Ser Ser Asp Leu Pro Lys Ser Pro Glu Thr  
     180              185                190  
 Ala Val Ala Ala Ile Ser Glu Asp Leu Glu Ile Ser Glu Asn Ile Ser  
     195              200                205  
 Ala Arg Asp Pro Leu Gln Gly Leu Ala Phe Phe Tyr Lys Asn Thr Ser  
     210              215                220  
 Ser Gln Ser Ile Ser Glu Lys Asp Ser Ser Phe Gln Gly Ile Ile Phe  
     225              230                235                240  
 Ser Gly Ser Gly Ala Asn Ser Gly Leu Gly Phe Glu Asn Leu Lys Ala  
     245              250                255  
 Pro Lys Ser Gly Ala Ala Val Tyr Ser Asp Arg Asp Ile Val Phe Glu  
     260              265                270  
 Asn Leu Val Lys Gly Leu Ser Phe Ile Ser Cys Glu Ser Leu Glu Asp  
     275              280                285  
 Gly Ser Ala Ala Gly Val Asn Ile Val Val Thr His Cys Gly Asp Val  
     290              295                300  
 Thr Leu Thr Asp Cys Ala Thr Gly Leu Asp Leu Glu Ala Leu Arg Leu  
     305              310                315                320  
 Val Lys Asp Phe Ser Arg Gly Gly Ala Val Phe Thr Ala Arg Asn His  
     325              330                335  
 Glu Val Gln Asn Asn Leu Ala Gly Gly Ile Leu Ser Val Val Gly Asn  
     340              345                350  
 Lys Gly Ala Ile Val Val Glu Lys Asn Ser Ala Glu Lys Ser Asn Gly

355	360	365
Gly Ala Phe Ala Cys Gly Ser	Phe Val Tyr Ser Asn	Asn Glu Asn Thr
370	375	380
Ala Leu Trp Lys Glu Asn Gln	Ala Leu Ser Gly	Gly Ala Ile Ser Ser
385	390	395
Ala Ser Asp Ile Asp Ile Gln	Gly Asn Cys Ser	Ala Ile Glu Phe Ser
405	410	415
Gly Asn Gln Ser Leu Ile Ala	Leu Gly His Ile	Gly Leu Thr Asp
420	425	430
Phe Val Gly Gly Ala Leu Ala	Gln Gly Thr	Leu Thr Leu Arg
435	440	445
Asn Asn Ala Val Val Gln	Cys Val Lys Asn	Thr Ser Lys Thr His Gly
450	455	460
Gly Ala Ile Leu Ala Gly Thr	Val Asp Leu Asn	Glu Thr Ile Ser Glu
465	470	475
Val Ala Phe Lys Gln Asn Thr	Ala Ala Leu	Thr Gly Gly Ala Leu Ser
485	490	495
Ala Asn Asp Lys Val Ile Ile	Ala Asn Phe	Gly Glu Ile Leu Phe
500	505	510
Glu Gln Asn Glu Val Arg Asn	His Gly Gly	Ala Ile Tyr Cys Gly Cys
515	520	525
Arg Ser Asn Pro Lys Leu	Glu Gln Lys Xaa	Ser Gly Glu Asn Ile Asn
530	535	540
Ile Ile Gly Asn Ser Gly	Ala Ile Thr Phe	Leu Lys Asn Lys Ala Ser
545	550	555
Val Leu Glu Val Met Thr	Gln Ala Glu Asp	Tyr Ala Gly Gly Ala
565	570	575
Leu Trp Gly His Asn Val	Leu Leu Asp Ser	Asn Ser Gly Asn Ile Gln
580	585	590
Phe Ile Gly Asn Ile Gly	Gly Arg Asn Phe	Trp Ile Gly Glu Tyr Val
595	600	605
Gly Gly Gly Ala Ile Leu	Ser Thr Asp Arg	Val Thr Ile Ser Asn Asn
610	615	620
Ser Gly Asp Val Val Phe	Lys Gly Asn Lys	Gly Gln Cys Leu Ala Gln
625	630	635
Lys Tyr Val Ala Pro Gln	Glu Thr Ala Pro	Val Glu Ser Asp Ala Ser
645	650	655
Ser Thr Asn Lys Asp Glu	Lys Ser Leu Asn	Ala Cys Ser His Gly Asp
660	665	670
His Tyr Pro Pro Lys Thr	Val Glu Glu Val	Pro Pro Ser Leu Leu
675	680	685
Glu Glu His Pro Val Val	Ser Ser Thr Asp	Ile Arg Gly Gly Ala
690	695	700
Ile Leu Ala Gln His Ile	Phe Ile Thr Asp	Asn Thr Gly Asn Leu Arg
705	710	715
Phe Ser Gly Asn Leu	Gly Gly Glu Glu	Ser Ser Thr Val Gly Asp
725	730	735
Leu Ala Ile Val Gly	Gly Ala Leu	Leu Ser Thr Asn Glu Val Asn
740	745	750
Val Cys Ser Asn Gln Asn	Val Val Phe	Ser Asp Asn Val Thr Ser Asn
755	760	765
Gly Cys Asp Ser Gly	Gly Ala Ile	Leu Ala Lys Lys Val Asp Ile Ser
770	775	780
Ala Asn His Ser Val	Glu Phe Val	Ser Asn Gly Ser Gly Lys Phe Gly
785	790	795
Gly Ala Val Cys Ala	Leu Asn Glu Ser	Val Asn Ile Thr Asp Asn Gly
805	810	815
Ser Ala Val Ser Phe	Ser Lys Asn Arg	Thr Arg Leu Gly Gly Ala Gly
820	825	830
Val Ala Ala Pro Gln	Gly Ser Val Thr	Ile Cys Gly Asn Gln Gly Asn
835	840	845
Ile Ala Phe Lys Glu Asn	Phe Val Phe	Gly Ser Glu Asn Gln Arg Ser
850	855	860
Gly Gly Gly Ala Ile	Ile Ala Asn	Ser Ser Val Asn Ile Gln Asp Asn

865	870	875	880												
Ala	Gly	Asp	Ile	Leu	Phe	Val	Ser	Asn	Ser	Thr	Gly	Ser	Tyr	Gly	Gly
885	890	895													
Ala	Ile	Phe	Val	Gly	Ser	Leu	Val	Ala	Ser	Glu	Gly	Ser	Asn	Pro	Arg
900	905	910													
Thr	Leu	Thr	Ile	Thr	Gly	Asn	Ser	Gly	Asp	Ile	Leu	Phe	Ala	Lys	Asn
915	920	925													
Ser	Thr	Gln	Thr	Ala	Ala	Ser	Leu	Ser	Glu	Lys	Asp	Ser	Phe	Gly	Gly
930	935	940													
Gly	Ala	Ile	Tyr	Thr	Gln	Asn	Leu	Lys	Ile	Val	Lys	Asn	Ala	Gly	Asn
945	950	955													
Val	Ser	Phe	Tyr	Gly	Asn	Arg	Ala	Pro	Ser	Gly	Ala	Gly	Val	Gln	Ile
965	970	975													
Ala	Asp	Gly	Gly	Thr	Val	Cys	Leu	Glu	Ala	Phe	Gly	Gly	Asp	Ile	Leu
980	985	990													
Phe	Glu	Gly	Asn	Ile	Asn	Phe	Asp	Gly	Ser	Phe	Asn	Ala	Ile	His	Leu
995	1000	1005													
Cys	Gly	Asn	Asp	Ser	Lys	Ile	Val	Glu	Leu	Ser	Ala	Val	Gln	Asp	Lys
1010	1015	1020													
Asn	Ile	Ile	Phe	Gln	Asp	Ala	Ile	Thr	Tyr	Glu	Glu	Asn	Thr	Ile	Arg
1025	1030	1035													
Gly	Leu	Pro	Asp	Lys	Asp	Val	Ser	Pro	Leu	Ser	Ala	Pro	Ser	Leu	Ile
1045	1050	1055													
Phe	Asn	Ser	Lys	Pro	Gln	Asp	Asp	Ser	Ala	Gln	His	His	Glu	Gly	Thr
1060	1065	1070													
Ile	Arg	Phe	Ser	Arg	Gly	Val	Pro	Lys	Ile	Pro	Gln	Ile	Ala	Ala	Ile
1075	1080	1085													
Gln	Glu	Gly	Thr	Leu	Ala	Leu	Ser	Gln	Asn	Ala	Glu	Leu	Trp	Leu	Ala
1090	1095	1100													
Gly	Leu	Lys	Gln	Glu	Thr	Gly	Ser	Ser	Ile	Val	Leu	Ser	Ala	Gly	Ser
1105	1110	1115													
Ile	Leu	Arg	Ile	Phe	Asp	Ser	Gln	Val	Asp	Ser	Ser	Ala	Pro	Leu	Pro
1125	1130	1135													
Thr	Glu	Asn	Lys	Glu	Glu	Thr	Leu	Val	Ser	Ala	Gly	Val	Gln	Ile	Asn
1140	1145	1150													
Met	Ser	Ser	Pro	Thr	Pro	Asn	Lys	Asp	Lys	Ala	Val	Asp	Thr	Pro	Val
1155	1160	1165													
Leu	Ala	Asp	Ile	Ile	Ser	Ile	Thr	Val	Asp	Leu	Ser	Ser	Phe	Val	Pro
1170	1175	1180													
Glu	Gln	Asp	Gly	Thr	Leu	Pro	Leu	Pro	Pro	Glu	Ile	Ile	Ile	Pro	Lys
1185	1190	1195													
Gly	Thr	Lys	Leu	His	Ser	Asn	Ala	Ile	Asp	Leu	Lys	Ile	Ile	Asp	Pro
1205	1210	1215													
Thr	Asn	Val	Gly	Tyr	Glu	Asn	His	Ala	Leu	Leu	Ser	Ser	His	Lys	Asp
1220	1225	1230													
Ile	Pro	Leu	Ile	Ser	Leu	Lys	Thr	Ala	Glu	Gly	Met	Thr	Gly	Thr	Pro
1235	1240	1245													
Thr	Ala	Asp	Ala	Ser	Leu	Ser	Asn	Ile	Lys	Ile	Asp	Val	Ser	Leu	Pro
1250	1255	1260													
Ser	Ile	Thr	Pro	Ala	Thr	Tyr	Gly	His	Thr	Gly	Val	Trp	Ser	Glu	Ser
1265	1270	1275													
Lys	Met	Glu	Asp	Gly	Arg	Leu	Val	Val	Gly	Trp	Gln	Pro	Thr	Gly	Tyr
1285	1290	1295													
Lys	Leu	Asn	Pro	Glu	Lys	Gln	Gly	Ala	Leu	Val	Leu	Asn	Asn	Leu	Trp
1300	1305	1310													
Ser	His	Tyr	Thr	Asp	Leu	Arg	Ala	Leu	Lys	Gln	Glu	Ile	Phe	Ala	His
1315	1320	1325													
His	Thr	Ile	Ala	Gln	Arg	Met	Glu	Leu	Asp	Phe	Ser	Thr	Asn	Val	Trp
1330	1335	1340													
Gly	Ser	Gly	Leu	Gly	Val	Val	Glu	Asp	Cys	Gln	Asn	Ile	Gly	Glu	Phe
1345	1350	1355													
Asp	Gly	Phe	Lys	His	His	Leu	Thr	Gly	Tyr	Ala	Leu	Gly	Leu	Asp	Thr
1365	1370	1375													
Gln	Leu	Val	Glu	Asp	Phe	Leu	Ile	Gly	Gly	Cys	Phe	Ser	Gln	Phe	Phe

1380	1385	90
Gly Lys Thr Glu Ser Gln Ser Tyr Lys Ala Lys Asn Asp Val Lys Ser		
1395	1400	1405
Tyr Met Gly Ala Ala Tyr Ala Gly Ile Leu Ala Gly Pro Trp Leu Ile		
1410	1415	1420
Lys Gly Ala Phe Val Tyr Gly Asn Ile Asn Asn Asp Leu Thr Thr Asp		
1425	1430	1435
Tyr Gly Thr Leu Gly Ile Ser Thr Gly Ser Trp Ile Gly Lys Gly Phe		
1445	1450	1455
Ile Ala Gly Thr Ser Ile Asp Tyr Arg Tyr Ile Val Asn Pro Arg Arg		
1460	1465	1470
Phe Ile Ser Ala Ile Val Ser Thr Val Val Pro Phe Val Glu Ala Glu		
1475	1480	1485
Tyr Val Arg Ile Asp Leu Pro Glu Ile Ser Glu Gln Gly Lys Glu Val		
1490	1495	1500
Arg Thr Phe Gln Lys Thr Arg Phe Glu Asn Val Ala Ile Pro Phe Gly		
1505	1510	1515
Phe Ala Leu Glu His Ala Tyr Ser Arg Gly Ser Arg Ala Glu Val Asn		
1525	1530	1535
Ser Val Gln Leu Ala Tyr Val Phe Asp Val Tyr Arg Lys Gly Pro Val		
1540	1545	1550
Ser Leu Ile Thr Leu Lys Asp Ala Ala Tyr Ser Trp Lys Ser Tyr Gly		
1555	1560	1565
Val Asp Ile Pro Cys Lys Ala Trp Lys Ala Arg Leu Ser Asn Asn Thr		
1570	1575	1580
Glu Trp Asn Ser Tyr Leu Ser Thr Tyr Leu Ala Phe Asn Tyr Glu Trp		
1585	1590	1595
Arg Glu Asp Leu Ile Ala Tyr Asp Phe Asn Gly Gly Ile Arg Ile Ile		
1605	1610	1615
Phe		

&lt;210&gt;1036

&lt;211&gt;504

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1036

Gln Ser Ile Leu Glu Ser Ile Ile Lys Tyr Phe Tyr Leu Ile His Asn		
1	5	10
Ser Lys Met His Met Ser Asn Pro Ile Ser Leu Phe Ser Pro Ala Glu		
20	25	30
Leu Ile Ala Lys Tyr Asn Leu Ile Pro Lys Thr Ser Pro Ile Tyr Pro		
35	40	45
Arg Arg Thr Glu Leu Ile Ile Leu Glu Glu Asn Ala Cys Gln Thr Arg		
50	55	60
Leu Thr Asn Val Ala Gln Val Leu His Pro Ser Ser Leu Phe Ser Met		
65	70	75
80		
Ser Lys Lys Ile Leu Asn Pro Cys Gly Cys Ser Gly Gly Pro Leu Cys		
85	90	95
Trp Val Ile Leu Asn Ile Leu Ala Phe Ile Ile Thr Ser Val Leu Phe		
100	105	110
Ile Ile Leu Leu Pro Val Asn Leu Ile Val Ala Gly Leu Arg Leu Phe		
115	120	125
Met Pro Leu Pro Pro Lys Lys Ile Val Glu Asp Leu Ser Glu Pro Thr		
130	135	140
Thr Glu Glu Thr Asn Glu Val Ile Gln Pro Phe Ile Phe Ala Leu Gln		
145	150	155
160		
Ala Leu Leu Phe Glu Asp Asn Lys Leu Arg Ser Phe Lys Ile Val Glu		
165	170	175
Gln Ser Val Gly Lys Ala Pro Leu Pro Asn Pro Phe Leu Asn Arg Leu		
180	185	190
Val Ala Ile Ser Pro Gln Xaa Ser Gln Glu Ala Met Arg Lys Ile Pro		
195	200	205
Asp Leu Cys Ser Gln Leu Lys Lys Val Leu Lys Ser Leu Gly Val Leu		
210	215	220

Thr Pro Glu Trp Lys His Met Leu Lys Tyr Phe Glu Glu Leu Lys Asn  
 225 230 235 240  
 Glu His Asp Ser Asn Pro Asp Lys Lys Thr Phe Pro Ile Leu Ile Lys  
 245 250 255  
 Leu Leu Ile Glu Ala Leu Thr Gly Lys Ser Ser Leu Pro Lys Thr Pro  
 260 265 270  
 Ser Thr Lys Glu Lys Met Gln Ala Ala Leu Phe Ile Ala Ser Ser Cys  
 275 280 285  
 Lys Thr Cys Lys Pro Thr Trp Gly Glu Val Ile Thr Arg Ser Leu Asn  
 290 295 300  
 Arg Leu Tyr Ser Ile Ala Asn Glu Gly Asp Asn Gln Leu Leu Ile Trp  
 305 310 315 320  
 Val Gln Glu Phe Lys Glu Arg Glu Leu Met Ser Ile Gln Asp Gly Asp  
 325 330 335  
 Asp Ala Glu Glu Tyr Arg Phe Ala Ala Gln Gln His Gly Glu Arg Tyr  
 340 345 350  
 Thr Glu Ala Ile Glu Gln Val Leu Arg Asn Glu Ser Ala Ala Lys Leu  
 355 360 365  
 Gln Trp His Val Ile Asn Thr Met Lys Phe Phe His Gly Lys Asn Leu  
 370 375 380  
 Gly Leu Val Thr Glu His Leu Gln Asp Thr Leu Gly Ala Leu Thr Leu  
 385 390 395 400  
 Arg Gln Thr Thr Val Asp Thr His Gln Gly Arg Glu Asp Ala Asp Leu  
 405 410 415  
 Ser Ala Ala Leu Phe Leu Asn Lys Tyr Leu Asn Ser Gly Asn Gln Leu  
 420 425 430  
 Val Asn Ser Val Phe Lys Ser Met Gln Lys Ala Asp Pro Glu Thr Lys  
 435 440 445  
 Ala Leu Ile Arg Glu Phe Ala Leu Asp Ile Leu Tyr Ala Ser Leu Arg  
 450 455 460  
 Leu Pro Gln Thr Ser Ala His Thr Glu Val Phe Ser Thr Leu Leu Met  
 465 470 475 480  
 Asp Pro Glu Thr Tyr Glu Pro Asn Lys Ala Cys Ile Ala Tyr Leu Leu  
 485 490 495  
 Tyr Val Leu Lys Ile Ile Glu Leu  
 500

&lt;210&gt;1037

&lt;211&gt;615

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1037

Lys Gly Phe Ser Phe Ser Lys Val Gly Leu Asn Met Ile Pro Ser Gly  
 1 5 10 15  
 Leu Val Tyr Leu Leu Tyr Pro Leu Gly Phe Leu Ala Ser Leu Phe Phe  
 20 25 30  
 Gly Ser Ala Phe Ser Ile Gln Trp Trp Leu Ser Lys Lys Arg Lys Glu  
 35 40 45  
 Val Tyr Ala Pro Arg Ser Phe Trp Ile Leu Ser Ser Ile Gly Ala Thr  
 50 55 60  
 Leu Met Ile Val His Gly Thr Ile Gln Ser Gln Phe Pro Val Thr Val  
 65 70 75 80  
 Leu His Val Ile Asn Leu Ile Ile Tyr Leu Arg Asn Leu Asn Ile Thr  
 85 90 95  
 Ser Ser Arg Pro Ile Ser Phe Arg Ala Thr Leu Val Leu Met Ala Leu  
 100 105 110  
 Ser Val Val Phe Val Thr Leu Pro Phe Leu Tyr Val Asn Met Glu Trp  
 115 120 125  
 Met Ala Ser Pro Asn Ile Phe His Leu Pro Leu Pro Pro Ala Gln Leu  
 130 135 140  
 Ser Trp His Leu Ile Gly Cys Leu Gly Leu Ala Ile Phe Ser Gly Arg  
 145 150 155 160  
 Phe Leu Ile Gln Trp Phe Tyr Ile Glu Ser Asn Asn Thr Lys Asp Phe  
 165 170 175  
 Pro Leu Leu Phe Trp Lys Ile Gly Leu Leu Gly Gly Leu Leu Ala Leu

180	185
Val Tyr Phe Ile Arg Ile Gly Asp Pro Ile Asn Ile Leu Cys Tyr Gly	
195	200
Cys Gly Leu Phe Pro Ser Ile Ala Asn Leu Arg Leu Phe Tyr Lys Glu	205
210	215
Gln Arg Ser Thr Pro Tyr Leu Asp Thr His Cys Phe Leu Ser Ala Gly	220
225	230
Glu Ala Ser Gly Asp Ile Leu Gly Gly Lys Leu Ile Gln Ser Ile Lys	235
245	250
Ser Leu Tyr Pro Asn Ile Arg Phe Trp Gly Val Gly Pro Ala Met	255
260	265
Arg Gln Glu Gly Leu Gln Pro Ile Leu Asn Met Glu Glu Phe Gln Val	270
275	280
Ser Gly Phe Ala Glu Val Leu Gly Ser Leu Phe Arg Leu Tyr Arg Asn	285
290	295
Tyr Arg Lys Ile Leu Lys Thr Ile Leu Lys His Lys Pro Ala Thr Leu	300
305	310
Ile Phe Ile Asp Phe Pro Asp Phe His Leu Leu Ile Lys Lys Leu	315
325	330
Arg Lys His Gly Tyr Arg Gly Lys Ile Ile His Tyr Val Cys Pro Ser	335
340	345
Ile Trp Ala Trp Arg Pro Lys Arg Lys Arg Ile Leu Glu Gln His Leu	350
355	360
Asp Met Leu Leu Leu Ile Leu Pro Phe Glu Glu Gly Leu Phe Lys Asn	365
370	375
Thr Ser Leu Glu Thr Val Tyr Leu Gly His Pro Leu Val Glu Glu Ile	380
385	390
Ser Asp Tyr Lys Glu Gln Ala Ser Trp Lys Glu Lys Phe Leu Asn Ser	395
405	410
Asp Arg Pro Ile Val Ala Ala Phe Pro Gly Ser Arg Arg Gly Asp Ile	400
420	425
Ser Arg Asn Leu Arg Ile Gln Val Gln Ala Phe Leu Asn Ser Ser Leu	430
435	440
Ser Gln Thr His Gln Phe Val Val Ser Ser Ser Ala Lys Tyr Asp	445
450	455
Glu Ile Ile Glu Asp Thr Leu Lys Ala Glu Gly Cys Gln His Ser Gln	460
465	470
Ile Ile Pro Met Asn Phe Arg Tyr Glu Leu Met Arg Ser Cys Asp Cys	475
485	490
Ala Leu Ala Lys Cys Gly Thr Ile Val Leu Glu Thr Ala Leu Asn Gln	480
500	505
Thr Pro Thr Ile Val Met Cys Arg Leu Arg Pro Phe Asp Thr Phe Leu	510
515	520
Ala Lys Tyr Ile Phe Lys Ile Leu Leu Pro Ala Tyr Ser Leu Pro Asn	525
530	535
Ile Ile Met Asn Ser Val Ile Phe Pro Glu Phe Ile Gly Gly Lys Lys	540
545	550
Asp Phe His Pro Glu Glu Thr Ala Thr Ala Leu Asp Leu Leu Asn Gln	555
565	570
His Gly Ser Lys Glu Lys Gln Lys Glu Asp Cys Arg Lys Leu Cys Lys	575
580	585
Val Met Thr Thr Gly Gln Ile Ala Ser Glu Glu Phe Leu Lys Arg Ile	590
595	600
Phe Asp Thr Leu Pro Ala Val	605
610	615
<210>1038	
<211>430	
<212>PRT	
<213>Chlamydia pneumoniae.	
<400>1038	
Met Val Cys Glu Asn Asn Ile Leu Ser Gly Arg Gly Leu Glu Leu Leu	
1	5
Lys Lys Lys Ser Asn Ile Thr Leu Thr Pro Thr Ile Tyr Ser Val Ser	10
20	25
	15
	30

Asn His Asn Ile Lys Leu Lys Asp Phe Ser Pro His      Leu Ser Val  
       35                          40                          45  
 Ile Lys Thr Leu Arg Lys Ala Gly Tyr Ile Ala Tyr Ile Val Gly Gly  
       50                          55                          60  
 Cys Ile Arg Asp Leu Leu Leu Asn Thr Thr Pro Lys Asp Phe Asp Ile  
       65                          70                          75                          80  
 Ser Thr Ser Ala Lys Pro Glu Glu Ile Lys Ala Ile Phe Lys Asn Cys  
       85                          90                          95  
 Ile Leu Val Gly Lys Arg Phe Arg Leu Ala His Ile Arg Phe Ser Lys  
       100                          105                          110  
 Gln Ile Ile Glu Val Ser Thr Phe Arg Ser Gly Ser Thr Asp Glu Asp  
       115                          120                          125  
 Val Leu Ile Thr Lys Asp Asn Leu Trp Gly Thr Pro Glu Glu Asp Val  
       130                          135                          140  
 Leu Arg Arg Asp Phe Thr Ile Asn Gly Leu Phe Tyr Asp Pro Glu His  
       145                          150                          155                          160  
 Glu Glu Ile Ile Asp Tyr Thr Gly Gly Val Asn Asp Leu Arg Asn Arg  
       165                          170                          175  
 Tyr Leu Arg Thr Ile Gly Asp Pro Phe Thr Arg Phe Lys Gln Asp Pro  
       180                          185                          190  
 Val Arg Met Leu Arg Leu Leu Lys Ile Leu Ser Arg Ser Pro Phe Thr  
       195                          200                          205  
 Val Glu Thr Gln Thr Gln Glu Ala Leu Ile Ala Cys Arg Gln Glu Leu  
       210                          215                          220  
 Ile Lys Ser Ser Arg Ala Arg Val Phe Glu Glu Leu Ile Lys Met Leu  
       225                          230                          235                          240  
 Asn Ser Gly Ala Ala Lys Asn Phe Phe Gln Leu Leu Ile Glu Asn His  
       245                          250                          255  
 Leu Leu Glu Ile Leu Phe Pro Tyr Met Asp Lys Ala Phe Arg Leu Asn  
       260                          265                          270  
 Arg Ala Leu Glu Glu Gln Thr Ala Thr Tyr Leu Lys Ala Leu Asp Asp  
       275                          280                          285  
 Lys Ile Leu Lys Lys Glu Ala Glu Tyr Asp Arg His Gln Leu Met Ala  
       290                          295                          300  
 Ile Phe Leu Phe Pro Leu Val Asn Phe Asn Val Arg Tyr Lys His Gln  
       305                          310                          315                          320  
 Lys His Pro Tyr Leu Ser Leu Thr Ser Val Phe Asp Tyr Ile Lys Asn  
       325                          330                          335  
 Phe Leu Glu Gln Phe Phe Ala Asp Ser Phe Thr Ser Cys Ser Lys Lys  
       340                          345                          350  
 Asn Phe Ile Leu Thr Ala Leu Ile Leu Gln Met Gln Tyr Arg Leu Thr  
       355                          360                          365  
 Pro Leu Ile Pro Thr Lys Lys Ala Leu Phe Phe Asn Lys Lys Leu Leu  
       370                          375                          380  
 His His Thr Arg Phe Leu Glu Ala Leu Ser Leu Leu Glu Ile Arg Ser  
       385                          390                          395                          400  
 Ile Val Tyr Pro Lys Leu Asp Lys Val Tyr Val Ala Trp Ile Arg His  
       405                          410                          415  
 His Gln Thr Leu Lys Cys Lys Lys Asp Ser His Ser Gln Lys  
       420                          425                          430

&lt;210&gt;1039

&lt;211&gt;395

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1039

Glu Arg Ile Asp Cys Trp Leu Asn Ser Met Gly Ile Glu Thr Leu Val  
       1                          5                          10                          15  
 Leu Gly Pro Ile Pro Thr Pro Gly Val Ala Phe Ile Thr Arg Ala Tyr  
       20                          25                          30  
 Arg Ala Asp Ala Gly Ile Met Ile Ser Ala Ser His Asn Pro Tyr Arg  
       35                          40                          45  
 Asp Asn Gly Ile Lys Ile Phe Ser Leu Glu Gly Phe Lys Ile Ser Asp  
       50                          55                          60  
 Val Leu Glu Gln Arg Ile Glu Thr Met Val Ser Glu Ala Asp Phe Gly

65	70	75	80
Pro Leu Pro Glu Asp His Ala Val Gly Lys Asn Lys Arg Val Ile Asp			
85	90	95	
Ala Met Gly Arg Tyr Val Glu Phe Val Lys Ala Thr Phe Pro Lys Gly			
100	105	110	
Arg Thr Leu Lys Gly Leu Lys Ile Val Leu Asp Cys Ala His Gly Ala			
115	120	125	
Ser Tyr Lys Val Ala Pro Ser Val Phe Glu Glu Leu Asp Ala Glu Val			
130	135	140	
Ile Cys Tyr Gly Cys Glu Pro Thr Gly Ile Asn Ile Asn Glu His Cys			
145	150	155	160
Gly Ala Leu Phe Pro Gln Val Ile Gln Lys Ala Val Ile Glu His Gln			
165	170	175	
Ala His Leu Gly Ile Ala Leu Asp Gly Asp Gly Asp Arg Ile Ile Met			
180	185	190	
Val Asp Glu Lys Gly His Ile Val Asp Gly Asp Met Ile Leu Ser Ile			
195	200	205	
Cys Ala Gly Asp Leu Lys Lys Arg Ser Ala Leu Pro His Asn Arg Val			
210	215	220	
Val Ala Thr Ile Met Thr Asn Phe Gly Val Leu Lys Tyr Leu Glu Gly			
225	230	235	240
Leu Gly Leu Gln Val Phe Thr Ser Pro Val Gly Asp Arg His Val Leu			
245	250	255	
His Ala Met Leu Glu His Glu Val Thr Xaa Gly Gly Glu Gln Ser Gly			
260	265	270	
His Met Ile Phe Leu Asp Tyr Asn Thr Thr Gly Asp Gly Ile Val Ser			
275	280	285	
Ala Leu Gln Val Leu Arg Ile Met Ile Glu Ser Glu Ser Met Leu Ser			
290	295	300	
Asp Leu Thr Ala Pro Ile Val Lys Ser Pro Gln Thr Leu Ile Asn Val			
305	310	315	320
Ala Val Arg Glu Lys Ile Pro Leu Glu Thr Ile Pro Leu Ile Glu Arg			
325	330	335	
Thr Leu Arg Asp Val Gln Asp Ala Leu Gly Pro Ser Gly Arg Ile Leu			
340	345	350	
Leu Arg Tyr Ser Gly Thr Glu Asn Ile Cys Arg Val Met Val Glu Gly			
355	360	365	
His Lys Lys His Gln Val Asp Cys Leu Ala Lys Ala Leu Ala Asp Val			
370	375	380	
Ile Asp Ala Glu Leu Gly Thr Gly Ser Arg Glu			
385	390	395	

&lt;210&gt;1040

&lt;211&gt;161

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1040

Met Cys Gly Ile Phe Gly Tyr Leu Gly Asn Gln Asp Gly Val Ser Ile			
1	5	10	15
Val Leu Glu Gly Leu Ala Lys Leu Glu Tyr Arg Gly Tyr Asp Ser Ala			
20	25	30	
Gly Leu Ala Ala Val Val Glu Gln Glu Leu Phe Ile Arg Lys Thr Val			
35	40	45	
Gly Arg Val Gln Glu Leu Ser Asn Leu Phe Gln Glu Arg Glu Ile Pro			
50	55	60	
Thr Ala Ser Val Ile Gly His Thr Arg Trp Ala Thr His Gly Val Pro			
65	70	75	80
Thr Glu Ile Asn Ala His Pro His Val Asp Glu Gly Arg Ser Cys Ala			
85	90	95	
Val Val His Asn Gly Ile Ile Glu Asn Phe Lys Glu Leu Arg Arg Glu			
100	105	110	
Leu Thr Ala Gln Gly Ile Ser Phe Ala Ser Asp Thr Asp Ser Glu Ile			
115	120	125	
Ile Val Gln Leu Phe Ser Leu Tyr Tyr Gln Glu Ser Gln Asp Leu Val			
130	135	140	

Phe Ser Phe Cys Gln Thr Leu Ala Gln Leu Arg Gly Ser Val Ala Ala  
 145 150 155 160  
 Leu

&lt;210&gt;1041

&lt;211&gt;307

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1041

Arg Ser Cys Ala Leu Ile His Lys Asp His Pro His Thr Ile Leu Cys  
 1 5 10 15  
 Ala Ser Gln Glu Ser Pro Leu Ile Leu Gly Leu Gly Lys Glu Glu Thr  
 20 25 30  
 Phe Ile Ala Ser Asp Ser Arg Ala Phe Phe Lys Tyr Thr Arg His Ser  
 35 40 45  
 Gln Ala Leu Ala Ser Gly Glu Phe Ala Ile Val Ser Gln Gly Lys Glu  
 50 55 60  
 Pro Glu Val Tyr Asn Leu Glu Leu Lys Ile His Lys Asp Val Arg  
 65 70 75 80  
 Gln Ile Thr Cys Ser Glu Asp Ala Ser Asp Lys Ser Gly Tyr Gly Tyr  
 85 90 95  
 Tyr Met Leu Lys Glu Ile Tyr Asp Gln Pro Glu Val Leu Glu Gly Leu  
 100 105 110  
 Ile Gln Lys His Met Asp Glu Glu Gly His Ile Leu Ser Glu Phe Leu  
 115 120 125  
 Ser Asp Val Pro Ile Lys Ser Phe Lys Glu Ile Thr Ile Val Ala Cys  
 130 135 140  
 Gly Ser Ser Tyr His Ala Gly Tyr Leu Ala Lys Tyr Ile Ile Glu Ser  
 145 150 155 160  
 Leu Val Ser Ile Pro Val His Ile Glu Val Ala Ser Glu Phe Arg Tyr  
 165 170 175  
 Arg Arg Pro Tyr Ile Gly Lys Asp Thr Leu Gly Ile Leu Ile Ser Gln  
 180 185 190  
 Ser Gly Glu Thr Ala Asp Thr Leu Ala Ala Leu Lys Glu Leu Arg Arg  
 195 200 205  
 Arg Asn Ile Ala Tyr Leu Leu Gly Ile Cys Asn Val Pro Glu Ser Ala  
 210 215 220  
 Ile Ala Leu Gly Val Asp His Cys Leu Phe Leu Glu Ala Gly Val Glu  
 225 230 235 240  
 Ile Gly Val Ala Thr Thr Lys Ala Phe Thr Ser Gln Leu Leu Leu Leu  
 245 250 255  
 Val Phe Leu Gly Leu Lys Leu Ala Asn Val His Gly Ala Leu Thr His  
 260 265 270  
 Ala Glu Gln Cys Ser Phe Gly Gln Gly Leu Gln Ser Leu Pro Asp Leu  
 275 280 285  
 Cys Gln Lys Leu Leu Ala Gln Arg Val Ser Pro Phe Leu Gly Ala Ala  
 290 295 300  
 Leu Leu Leu  
 305

&lt;210&gt;1042

&lt;211&gt;182

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1042

Leu Thr Gln Asn Asn Val Pro Leu Ala Arg Asp Tyr Lys Ala Tyr Gln  
 1 5 10 15  
 Ile Ser Val Lys Asn Phe Leu Pro Asn Glu Ser Leu His Ser Trp Ala  
 20 25 30  
 Gln Pro Tyr Ser Tyr Glu Asp Lys Phe Leu Phe Leu Gly Arg Arg Leu  
 35 40 45  
 Met Tyr Pro Val Val Met Glu Ala Ala Leu Lys Leu Lys Glu Ile Ala  
 50 55 60  
 Tyr Ile Glu Ala Asn Ala Tyr Pro Gly Gly Glu Met Lys His Gly Pro  
 65 70 75 80

Ile Ala Leu Ile Ser Lys Gly Thr Pro Val Ile Ala Phe Cys Gly Asp  
                   85                 90                 95  
 Asp Ile Val Tyr Glu Lys Met Ile Gly Asn Met Met Glu Val Lys Ala  
                   100             105                 110  
 Arg His Ala His Val Ile Ala Ile Ala Pro Glu Ser Arg Glu Asp Ile  
                   115             120                 125  
 Ala Ala Val Ser Asp Gln Gln Ile Phe Val Pro Asp Cys His Phe Leu  
                   130             135                 140  
 Ala Ala Pro Val Leu Tyr Thr Ile Val Gly Gln Val Met Ala Tyr Ala  
                   145             150                 155                 160  
 Met Ala Leu Ala Lys Gly Met Glu Ile Asp Cys Pro Arg Asn Leu Ala  
                   165             170                 175  
 Lys Ser Val Thr Val Glu  
                   180  
<210>1043  
<211>259  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1043  
Ser His Asp Leu Asp Xaa Arg Ile Lys Glu Pro Ser Glu His Ala Phe  
   1                 5                 10                 15  
Tyr Gly Gly Ile Tyr Phe Arg Ser Cys Arg Gln Asp Phe Tyr Met Pro  
   20                 25                 30  
Cys Leu Leu Val Ser Leu Leu Leu Pro Thr Asp Cys Tyr Phe Cys Glu  
   35                 40                 45  
Gly Gly Asn Ile Leu Cys Arg Val Phe Asn Cys Gln Asn Leu Gly Ile  
   50                 55                 60  
Ser Trp Ile Arg His Leu Gly Pro Leu Gly Phe Ala Ile Leu Met Gly  
   65                 70                 75                 80  
Pro Ile Ile Met Ala Gly Thr Lys Val Ile Asp Tyr Cys Asn Arg Phe  
   85                 90                 95  
Phe Met Phe Gly Leu Thr Val Ala Phe Gly Ile Phe Cys Ala Leu Gly  
   100                105                 110  
Phe Leu Lys Ile Gln Pro Ser Phe Leu Val Arg Ser Ser Trp Leu Thr  
   115                120                 125  
Thr Ile Asn Ala Phe Pro Val Phe Phe Leu Ala Phe Gly Phe Gln Ser  
   130                135                 140  
Ile Ile Pro Thr Leu Tyr Tyr Met Asp Lys Lys Val Gly Asp Val  
   145                150                 155                 160  
Lys Lys Ala Ile Leu Ile Gly Thr Leu Ile Pro Leu Val Leu Tyr Val  
   165                170                 175  
Leu Trp Glu Val Val Val Leu Gly Ala Val Ser Leu Pro Ile Leu Ser  
   180                185                 190  
Gln Ala Lys Ile Gly Gly Tyr Thr Ala Val Glu Ala Leu Lys Gln Ala  
   195                200                 205  
His Arg Ser Trp Ala Phe Tyr Ile Ala Gly Glu Leu Phe Gly Phe Phe  
   210                215                 220  
Ala Leu Val Ser Ser Phe Val Gly Val Ala Leu Gly Val Met Asp Phe  
   225                230                 235                 240  
Leu Ala Asp Gly Leu Lys Trp Asn Lys Lys Ser His Pro Asn Phe Gln  
   245                250                 255  
Phe Ser Phe

<210>1044  
<211>241  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1044  
Glu Gly Ser Met Gly Leu Tyr Asp Arg Asp Tyr Ile Gln Asp Ser Arg  
   1                 5                 10                 15  
Val Gln Gly Thr Phe Ala Ser Arg Val Tyr Gly Trp Met Thr Ala Gly  
   20                25                 30  
Leu Ile Val Thr Ser Cys Val Ala Leu Gly Leu Tyr Phe Ser Gly Leu  
   35                40                 45

Tyr Arg Ser Leu Phe Ser Phe Trp Trp Val Trp Cys Phe Ala Thr Leu  
       50                 55                 60  
 Gly Val Ser Phe Phe Ile Asn Ser Lys Ile Gln Thr Leu Ser Val Ser  
       65                 70                 75                 80  
 Ala Val Gly Gly Leu Phe Leu Leu Tyr Ser Thr Leu Glu Gly Met Phe  
       85                 90                 95  
 Phe Gly Thr Leu Leu Pro Val Tyr Ala Ala Gln Tyr Gly Gly Val  
       100                105                110  
 Ile Trp Ala Ala Phe Gly Ser Ala Ala Leu Val Phe Gly Leu Ala Ala  
       115                120                125  
 Val Tyr Gly Ala Phe Thr Lys Ser Asp Leu Thr Lys Ile Ser Lys Ile  
       130                135                140  
 Met Thr Phe Ala Leu Ile Gly Leu Leu Leu Val Thr Leu Val Phe Ala  
       145                150                155                160  
 Val Val Ser Met Phe Val Ser Met Pro Leu Ile Tyr Leu Leu Ile Cys  
       165                170                175  
 Tyr Leu Gly Leu Val Ile Phe Val Gly Leu Thr Ala Ala Asp Ala Gln  
       180                185                190  
 Ala Ile Arg Arg Ile Ser Ser Thr Ile Gly Asp Asn Asn Thr Leu Ser  
       195                200                205  
 Tyr Lys Leu Ser Leu Met Phe Ala Leu Lys Met Tyr Cys Asn Val Ile  
       210                215                220  
 Met Val Phe Trp Tyr Leu Leu Gln Ile Phe Ser Ser Ser Gly Asn Arg  
       225                230                235                240  
 Asp

&lt;210&gt;1045

&lt;211&gt;316

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1045

Arg Cys Ile Asn Asn Ser Leu Leu Phe Pro Ser Tyr Leu Val Ser Phe  
       1                 5                 10                 15  
 Leu Leu Leu Gln Leu Thr Leu Leu Leu Ala Met Phe Lys Phe Phe Arg  
       20                25                30  
 Asn Lys Leu Gln Ser Leu Phe Lys Lys Asn Ile Ser Leu Asp Leu Ile  
       35                40                45  
 Glu Asp Ala Glu Ser Leu Phe Tyr Glu Ala Asp Phe Gly Thr Glu Leu  
       50                55                60  
 Thr Glu Glu Leu Cys Ala Arg Leu Arg Arg Thr Lys Lys Ala Asp Ala  
       65                70                75                80  
 Ser Thr Ile Lys Asp Leu Ile Thr Val Leu Leu Arg Glu Ser Leu Glu  
       85                90                95  
 Gly Leu Pro Ser Gln Ala Ser Gln Ser Ser Gln Thr Arg Pro Ile Val  
       100               105               110  
 Ser Leu Leu Leu Gly Thr Asn Gly Ser Gly Lys Thr Thr Ala Ala  
       115               120               125  
 Lys Leu Ala His Tyr Tyr Lys Glu Arg Ser Glu Ser Val Met Leu Val  
       130               135               140  
 Ala Thr Asp Thr Phe Arg Ala Ala Gly Met Asp Gln Ala Arg Leu Trp  
       145               150               155                160  
 Ala Asn Glu Leu Gly Cys Gly Phe Val Ser Gly Gln Pro Gly Gly Asp  
       165               170               175  
 Ala Ala Ala Ile Ala Phe Asp Gly Ile Gln Ser Ala Ile Ala Arg Gly  
       180               185               190  
 Tyr Ser Arg Val Ile Ile Asp Thr Ser Gly Arg Leu His Val His Gly  
       195               200               205  
 Asn Leu Met Lys Glu Leu Ser Lys Ile Val Ser Val Cys Gly Lys Ala  
       210               215               220  
 Leu Glu Gly Ala Pro His Glu Ile Phe Met Thr Val Asp Ser Thr Leu  
       225               230               235                240  
 Gly Asn Asn Ala Ile Glu Gln Val Arg Val Phe His Asp Val Val Pro  
       245               250               255  
 Leu Ser Gly Leu Ile Phe Thr Lys Val Asp Gly Ser Ala Lys Gly Gly

260	265	270
Thr Leu Phe Gln Ile Ala Lys Arg	Leu Lys Ile Pro Thr	Lys Phe Ile
275	280	285
Gly Tyr Gly Glu Ser Leu Lys Asp Leu Asn Glu	Phe Asp Leu Asp	Leu
290	295	300
Phe Leu Asn Lys Leu Phe Pro Glu Val Glu Lys	Ile	
305	310	315
<210>1046		
<211>386		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1046		
Met His Leu His Glu Tyr Gln Ala Lys Asp Leu Ala Ser Tyr Asp		
1	5	10
Val Pro Ile Pro Pro Tyr Trp Val Val Ser Ser Glu Glu Gly Glu		
20	25	30
Leu Leu Ile Thr Lys Ser Gly Leu Asp Ser Ala Val Val Lys Val Gln		
35	40	45
Val His Ala Gly Gly Arg Gly Lys His Gly Gly Val Ile Val Ala Lys		
50	55	60
Ser Ser Ala Gly Ile Leu Gln Ala Val Ala Lys Leu Leu Gly Met His		
65	70	75
Phe Thr Ser Asn Gln Thr Ala Asp Gly Phe Leu Pro Val Glu Lys Val		
85	90	95
Leu Ile Ser Pro Leu Val Ala Ile Gln Arg Glu Tyr Tyr Val Ala Val		
100	105	110
Ile Met Asp Arg Lys His Arg Cys Pro Val Leu Met Leu Ser Lys Ala		
115	120	125
Gly Gly Met Asp Ile Glu Glu Val Ala His Ser Ser Pro Glu Gln Ile		
130	135	140
Leu Thr Leu Pro Leu Thr Ser Tyr Gly His Ile Tyr Ser Tyr Gln Leu		
145	150	155
Arg Gln Ala Thr Lys Phe Met Glu Trp Glu Gly Glu Val Met His Gln		
165	170	175
Gly Val Gln Leu Ile Lys Lys Leu Ala Lys Cys Phe Tyr Glu Asn Asp		
180	185	190
Val Ser Leu Leu Glu Ile Asn Pro Leu Val Leu Thr Leu Glu Gly Glu		
195	200	205
Leu Leu Val Leu Asp Ser Lys Ile Thr Ile Asp Asp Asn Ala Leu Tyr		
210	215	220
Arg His Pro Asn Leu Glu Val Leu Tyr Asp Pro Ser Gln Glu Asn Val		
225	230	235
Arg Asp Val Leu Ala Lys Gln Ile Gly Leu Ser Tyr Ile Ala Leu Ser		
245	250	255
Gly Asn Ile Gly Cys Ile Val Asn Gly Ala Gly Leu Ala Met Ser Thr		
260	265	270
Leu Asp Ile Leu Lys Leu His Gly Gly Asn Ala Ala Asn Phe Leu Asp		
275	280	285
Val Gly Gly Ala Ser Gln Lys Gln Ile Gln Glu Ala Val Ser Leu		
290	295	300
Val Leu Ser Asp Glu Ser Val Lys Val Leu Phe Ile Asn Ile Phe Gly		
305	310	315
Xaa Ile Met Asp Cys Ser Val Val Ala Ser Gly Leu Val Ala Val Met		
325	330	335
Glu Thr Arg Asp Gln Val Val Pro Thr Val Ile Arg Leu Glu Gly Thr		
340	345	350
Asn Val Glu Leu Gly Lys Glu Ile Val Gln Gln Ser Gly Ile Pro Cys		
355	360	365
Gln Phe Val Ser Ser Met Glu Glu Gly Ala Arg Arg Ala Val Glu Leu		
370	375	380
Ser Met		
385		
<210>1047		
<211>300		

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1047

Val Cys Arg Phe Arg Arg Tyr Met Phe His Ser Leu Ser Lys Asn Thr  
 1 5 10 15  
 Pro Ile Ile Thr Gln Gly Ile Thr Gly Lys Ala Gly Ser Phe His Thr  
 20 25 30  
 Glu Gln Cys Leu Ala Tyr Gly Thr Asn Phe Val Gly Val Thr Pro  
 35 40 45  
 Gly Lys Gly Thr Leu Trp Leu Asp Leu Pro Val Tyr Asp Ser Val  
 50 55 60  
 Leu Glu Ala Lys Gln Ala Thr Gly Cys Arg Ala Thr Met Ile Phe Val  
 65 70 75 80  
 Pro Pro Pro Tyr Ala Ala Glu Ala Ile Leu Glu Ala Glu Ala Gly  
 85 90 95  
 Ile Glu Leu Ile Val Cys Ile Thr Glu Gly Ile Pro Val Arg Asp Met  
 100 105 110  
 Leu Glu Val Ala Arg Val Met Asp Asn Ser Thr Ser Gln Leu Ile Gly  
 115 120 125  
 Pro Asn Cys Pro Gly Ile Ile Lys Pro Gly Glu Cys Lys Ile Gly Ile  
 130 135 140  
 Met Pro Gly Tyr Ile His Leu Pro Gly Asn Ile Gly Val Val Ser Arg  
 145 150 155 160  
 Ser Gly Thr Leu Thr Tyr Glu Ala Val Trp Gln Leu Thr Gln Leu Lys  
 165 170 175  
 Ile Gly Gln Ser Ile Cys Val Gly Ile Gly Gly Asp Pro Leu Asn Gly  
 180 185 190  
 Thr Ser Phe Ile Asp Val Leu Gln Ala Leu Glu Glu Asp Pro Tyr Thr  
 195 200 205  
 Glu Leu Ile Leu Met Ile Gly Glu Ile Gly Gly Ser Ala Glu Glu Glu  
 210 215 220  
 Ala Ala Ala Trp Ile Gln Ala His Cys Thr Lys Pro Val Val Ala Phe  
 225 230 235 240  
 Ile Ala Gly Val Thr Ala Pro Lys Gly Lys Arg Met Gly His Ala Gly  
 245 250 255  
 Ala Ile Ile Ser Gly Asn Ser Gly Asp Ala Lys Ser Lys Ile Gln Val  
 260 265 270  
 Leu Arg Glu Ser Gly Val Thr Val Val Glu Ser Pro Ala His Ile Gly  
 275 280 285  
 Lys Thr Val Asp Ala Val Leu Arg Ala Lys Glu Leu  
 290 295 300

&lt;210&gt;1048

&lt;211&gt;369

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1048

Ile Leu Met Leu Val Tyr Cys Phe Asp Pro Ser Val Pro Thr Ser Pro  
 1 5 10 15  
 Glu His Arg Leu Met Ala Ala Leu Asp Arg Trp Phe Phe Leu Gly Gly  
 20 25 30  
 His Arg Val Arg Ile Leu Thr Leu Glu Gly Asn His Tyr Arg Ala Phe  
 35 40 45  
 Gln Glu Asn Met Ser Ile Ser Thr Val Glu Lys Ile Leu Lys Leu Ile  
 50 55 60  
 Ser Tyr Leu Leu Ile Pro Ile Val Leu Ile Ala Leu Leu Ile Arg Cys  
 65 70 75 80  
 Phe Leu His Ser Arg Phe Lys Cys Asn Trp Lys Cys Asp Ser Leu Ser  
 85 90 95  
 Asp Ala Arg Val Pro His Asp Val Gln Pro Phe Asn Asp Phe Gln Leu  
 100 105 110  
 Phe Asn Asn Gln Glu Arg Leu Asn Ile Trp Lys Asn Arg Arg Tyr Val  
 115 120 125  
 Ser Gly Ile Asp Val Leu Met Val Pro Val Asp Tyr Leu Arg Ser Gln  
 130 135 140

Phe Pro Gly Phe Lys Glu Ile Pro Glu Ala Ile Arg Cys Glu Asn Tyr  
 145 150 155 160  
 Val Ser Asp Gly Gln Phe Ser Glu Glu Ser Lys Thr Ser Tyr Leu Arg  
 165 170 175  
 Ala Met Leu Thr Asp Ile Val Gly Tyr Ile Leu Ser Leu Asp Glu Thr  
 180 185 190  
 Tyr Trp Thr Asn Val Ile Leu Lys Ile Arg Ala Met Cys Ile Thr Phe  
 195 200 205  
 Glu Ser Phe Pro Gly Lys Glu Ala Asp Pro Asn Tyr Ser Pro Arg Val  
 210 215 220  
 Thr His His Tyr Phe Asp Glu Ser Trp Lys Ala Leu Ala Arg His Val  
 225 230 235 240  
 Leu Gly Glu Gly Asn Met Val Asn Arg Leu Asp Glu Ala Leu Ile Arg  
 245 250 255  
 Thr Glu Lys Pro Gly Lys Glu Gly Glu Cys Ile Thr Lys Gln Phe Leu  
 260 265 270  
 Lys Asp Tyr Cys Lys Lys His Leu Glu Val Met Ser Cys Pro Asp Phe  
 275 280 285  
 Ile Glu Ser Leu Val Asp Glu Lys Ile Arg Glu Phe Arg Cys Pro Ser  
 290 295 300  
 Ile Leu Asn Ser Ala Val Cys Asp Val Ile Asp Arg Lys Cys Gln Glu  
 305 310 315 320  
 His Leu Leu Lys Ala Ile Ile Asn Glu Ala Asn Arg Arg Leu Pro Gly  
 325 330 335  
 Met Lys Asn Ser Ser Phe Thr Met Arg Gly Asn Gln Val Leu Phe Tyr  
 340 345 350  
 Thr Ile Phe Ser Pro Pro Lys Leu Pro Pro Ala Ala Ser Ser Val Tyr  
 355 360 365  
 Phe

<210>1049  
<211>358  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1049

Leu Tyr Ile Asn Gln Phe Ala Asn Ile Leu Lys Ser Ser Phe Leu Met  
 1 5 10 15  
 Glu Val Tyr Ser Phe Ser Pro Ser Val Arg Thr Ser Phe Gln His Arg  
 20 25 30  
 Val Met Ala Ala Leu Asp Asn Trp Phe Phe Leu Gly Gly Arg Arg Leu  
 35 40 45  
 Lys Val Val Ser Leu Asp Ser Cys Asn Ser Gly Gln Ala Cys Glu Glu  
 50 55 60  
 Tyr Val Pro Ile Ser Thr Thr Glu Lys Val Leu Lys Ile Leu Ser Tyr  
 65 70 75 80  
 Leu Leu Ile Pro Ile Val Ile Ile Ala Leu Leu Ile Arg Tyr Leu Leu  
 85 90 95  
 His Ser Asn Phe Thr Ala Lys Val Ser Gln Lys Pro Trp Leu Lys Thr  
 100 105 110  
 Leu Gln Leu Gly Ile Asp Ile Lys Ser Phe Ile Leu Pro Gly Ser His  
 115 120 125  
 Val Asn Thr Met Asp Ser Ala Thr Leu Phe Lys Ala Ile Arg Leu Glu  
 130 135 140  
 Gly Lys Arg Val Asp Val Glu Tyr His Arg Leu His Ser Ser Asp Lys  
 145 150 155 160  
 Val Val Phe Tyr Ile Pro Ala Gln Lys Leu Pro Asp Asp Leu Arg Leu  
 165 170 175  
 Thr His Trp Leu Pro Glu Lys Glu Thr Arg Lys Thr Glu Tyr Val Arg  
 180 185 190  
 His Met Leu Ala His Val Met Gly Tyr Leu Thr Ser Gln Gly Lys Glu  
 195 200 205  
 Arg Leu Gln Gln Val Val Gln Asp Ser Arg Ser Ser Thr Ser Leu Gly  
 210 215 220  
 Ala Glu Lys Val Leu Gln Tyr Arg Phe Ile Asp His Pro Gln Ser Gln

225	230	235	240												
Gly	Glu	Phe	Gln	Arg	Leu	Leu	Asn	Glu	Asn	Ile	Thr	Thr	Lys	Gly	Ser
				245				250						255	
Glu	Asp	Lys	Glu	Val	Val	Gln	Ser	Asp	Leu	Phe	Asp	Met	Ala	Phe	Gln
				260				265				270			
Cys	Trp	Trp	Pro	Gln	Phe	Ile	Ser	Val	Ile	Gln	Ser	Pro	Thr	Phe	Ser
				275				280				285			
Glu	Glu	Leu	Val	His	Glu	Met	Ser	Gln	Lys	Leu	Asp	Leu	Asp	Cys	Ile
				290				295				300			
Tyr	Pro	Glu	Asp	Asp	Glu	Phe	Glu	Gln	Lys	Phe	Leu	Asn	Thr	Leu	Leu
				305				310				315			320
Lys	Ala	Val	Leu	His	His	Gly	Phe	Glu	Gly	Ile	Ser	Val	Ala	Ser	Met
				325				330				335			
Gly	Val	Ile	Phe	Leu	Ile	Cys	Pro	Asp	Ser	Leu	Ala	Leu	Gln	Ile	Pro
				340				345				350			
Phe	Leu	Arg	Asn	Gln	Lys										
				355											
<210>1050															
<211>338															
<212>PRT															
<213>Chlamydia pneumoniae															
<400>1050															
Phe	Ser	Pro	Ala	Val	Arg	Thr	Ser	Phe	Gln	His	Arg	Val	Met	Ala	Ala
				1				5				10			15
Leu	Asp	Ala	Trp	Phe	Phe	Leu	Gly	Gly	His	Arg	Leu	Lys	Val	Val	Ser
				20				25				30			
Leu	Asp	Ser	Cys	Asn	Ser	Gly	Trp	Ala	Tyr	Gln	Glu	Leu	Val	Ser	Ile
				35				40				45			
Ser	Thr	Thr	Glu	Lys	Val	Leu	Lys	Leu	Leu	Ser	Tyr	Leu	Leu	Val	Pro
				50				55				60			
Ile	Val	Ile	Ile	Ala	Leu	Leu	Ile	Arg	Cys	Leu	Leu	His	Ser	Asn	Phe
				65				70				75			80
Arg	Ile	Asp	Val	Glu	Lys	Glu	Arg	Trp	Leu	Lys	Ile	Arg	Glu	Leu	Gly
				85				90				95			
Ile	Asp	Ile	Glu	Ser	Cys	Lys	Leu	Pro	Ser	Ser	Tyr	Val	Asn	Gln	Val
				100				105				110			
Ser	Ser	Phe	Ile	Trp	Phe	Glu	Lys	Asp	Lys	Ser	Lys	Arg	Pro	Arg	Ile
				115				120				125			
Asp	Val	Asp	Tyr	His	Thr	Leu	His	Ser	Lys	Asp	Trp	Val	Val	Phe	Pro
				130				135				140			
Ile	Val	Phe	Gln	Lys	Ile	Pro	Lys	Thr	Ser	Arg	Phe	Ser	Tyr	Trp	Phe
				145				150				155			160
Ser	Gln	Lys	Glu	Thr	Arg	Lys	Arg	Asp	Tyr	Val	Arg	Asn	Met	Leu	Asp
				165				170				175			
His	Val	Ile	Gly	Tyr	Leu	Thr	Ser	Glu	Gly	Glu	Trp	Leu	Gln	Tyr	
				180				185				190			
Ile	Ser	Lys	Thr	Ser	Tyr	Gln	Ser	Ala	Thr	Ser	Leu	Asp	Pro	Glu	Arg
				195				200				205			
Val	Leu	Gln	Tyr	Cys	Leu	Thr	Asp	Asn	Gln	Glu	Leu	Gln	Gly	Glu	Val
				210				215				220			
Gln	Arg	Leu	Leu	Asn	Glu	Glu	Ser	Ala	Thr	Lys	Ser	Ser	Gly	Asp	Lys
				225				230				235			240
Glu	Val	Leu	Leu	Ser	His	Val	Ser	Asp	Ile	Ile	Cys	Gln	Cys	Trp	Trp
				245				250				255			
Pro	Lys	Phe	Leu	Glu	Val	Ile	Gln	Ser	Pro	Ala	Phe	Ile	Glu	Glu	Leu
				260				265				270			
Val	Glu	Glu	Val	Ser	Gly	Lys	Leu	Asn	Leu	Asp	Phe	Leu	Cys	Leu	Glu
				275				280				285			
Lys	Ala	Asn	Thr	Leu	Asp	Gln	Glu	Leu	Arg	Asn	Ser	Leu	Leu	Arg	Ala
				290				295				300			
Val	Val	His	His	Gly	Ser	Glu	Gly	Val	Asp	Ile	Lys	Lys	Val	Gly	Ala
				305				310				315			320
Gly	Leu	Ile	Ile	Tyr	Thr	Glu	Ala	Ile	Gln	Leu	Gln	Ile	Pro	Phe	Ser
				325				330				335			

Arg Ser

<210>1051

<211>245

<212>PRT

<213>Chlamydia pneumoniae

<400>1051

Gly	Ile	Asp	Met	Ile	Thr	Lys	Gln	Leu	Arg	Ser	Trp	Leu	Ala	Val	Leu
1							5		10				15		
Val	Gly	Ser	Ser	Leu	Leu	Ala	Leu	Pro	Leu	Ser	Gly	Gln	Ala	Val	Gly
	20						25					30			
Lys	Lys	Glu	Ser	Arg	Val	Ser	Glu	Leu	Pro	Gln	Asp	Val	Leu	Leu	Lys
	35						40				45				
Glu	Ile	Ser	Gly	Gly	Phe	Ser	Lys	Val	Ala	Thr	Lys	Ala	Thr	Pro	Ala
	50						55				60				
Val	Val	Tyr	Ile	Glu	Ser	Phe	Pro	Lys	Ser	Gln	Ala	Val	Thr	His	Pro
	65						70				75			80	
Ser	Pro	Gly	Arg	Arg	Gly	Pro	Tyr	Glu	Asn	Pro	Phe	Asp	Tyr	Phe	Asn
							85				90			95	
Asp	Glu	Phe	Phe	Asn	Arg	Phe	Phe	Gly	Leu	Pro	Ser	Gln	Arg	Glu	Lys
	100						105					110			
Pro	Gln	Ser	Lys	Glu	Ala	Val	Arg	Gly	Thr	Gly	Phe	Leu	Val	Ser	Pro
	115						120					125			
Asp	Gly	Tyr	Ile	Val	Thr	Asn	Asn	His	Val	Val	Glu	Asp	Thr	Gly	Lys
	130						135				140				
Ile	His	Val	Thr	Leu	His	Asp	Gly	Gln	Lys	Tyr	Pro	Ala	Thr	Val	Ile
	145						150				155			160	
Gly	Leu	Asp	Pro	Lys	Thr	Asp	Leu	Ala	Val	Ile	Lys	Ile	Lys	Ser	Gln
	165						170					175			
Asn	Leu	Pro	Tyr	Leu	Ser	Phe	Gly	Asn	Ser	Asp	His	Leu	Lys	Val	Gly
	180						185					190			
Asp	Trp	Ala	Ile	Ala	Ile	Gly	Asn	Pro	Phe	Gly	Leu	Gln	Ala	Thr	Val
	195						200					205			
Thr	Val	Val	Ser	Ser	Val	Leu	Lys	Glu	Glu	Ile	Asn	Ser	Thr	Leu	Gln
	210						215				220				
Ile	Leu	Lys	Ile	Leu	Phe	Arg	Gln	Met	Leu	Arg	Leu	Ile	Gln	Ala	Thr
	225						230				235			240	
Leu	Glu	Ala	Leu	Phe											
	245														

<210>1052

<211>317

<212>PRT

<213>Chlamydia pneumoniae

<400>1052

Ile	Pro	Lys	Pro	Pro	Val	Ser	Phe	Phe	Trp	Lys	Leu	Arg	Pro	Leu	Lys
1							5			10			15		
Ser	Arg	Arg	Leu	Gly	Asn	Cys	Asn	Trp	Lys	Ser	Leu	Arg	Ser	Ser	Ser
	20						25					30			
Tyr	Gly	His	Arg	Ser	Val	Ile	Ser	Ala	Lys	Gly	Arg	Asn	Gln	Leu	His
	35						40				45				
Ile	Ala	Asp	Phe	Glu	Asp	Phe	Ile	Gln	Thr	Asp	Ala	Ala	Ile	Asn	Pro
	50						55				60				
Gly	Asn	Ser	Gly	Gly	Pro	Leu	Leu	Asn	Ile	Asp	Gly	Gln	Val	Ile	Gly
	65						70				75			80	
Val	Asn	Thr	Ala	Ile	Val	Ser	Gly	Ser	Gly	Gly	Tyr	Ile	Gly	Ile	Gly
	85						90					95			
Phe	Ala	Ile	Pro	Ser	Leu	Met	Ala	Asn	Arg	Ile	Ile	Asp	Gln	Leu	Ile
	100						105					110			
Arg	Asp	Gly	Gln	Val	Thr	Arg	Gly	Phe	Leu	Gly	Val	Thr	Leu	Gln	Pro
	115						120					125			
Ile	Asp	Ala	Glu	Leu	Ala	Ala	Cys	Tyr	Lys	Leu	Glu	Lys	Val	Tyr	Gly
	130						135				140				
Ala	Leu	Val	Thr	Asp	Val	Val	Lys	Gly	Ser	Pro	Ala	Asp	Lys	Ala	Gly
	145						150				155			160	

Leu Lys Gln Glu Asp Val Ile Ile Ala Tyr Asn Gly Lys Glu Val Asp  
                  165                 170                 175  
 Ser Leu Ser Met Phe Arg Asn Ala Val Ser Leu Met Asn Pro Asp Thr  
                  180                 185                 190  
 Arg Ile Val Leu Lys Val Val Arg Glu Gly Lys Val Ile Glu Ile Pro  
                  195                 200                 205  
 Val Thr Val Ser Gln Ala Pro Lys Glu Asp Gly Met Ser Ala Leu Gln  
                  210                 215                 220  
 Arg Val Gly Ile Arg Val Gln Asn Leu Thr Pro Glu Thr Ala Lys Lys  
                  225                 230                 235                 240  
 Leu Gly Ile Ala Pro Glu Thr Lys Gly Ile Leu Ile Ile Ser Val Glu  
                  245                 250                 255  
 Pro Gly Ser Val Ala Ala Ser Ser Gly Ile Ala Pro Gly Gln Leu Ile  
                  260                 265                 270  
 Leu Ala Val Asn Arg Gln Lys Val Ser Ser Ile Glu Asp Leu Asn Arg  
                  275                 280                 285  
 Thr Leu Lys Asp Ser Asn Asn Glu Asn Ile Leu Leu Met Val Ser Gln  
                  290                 295                 300  
 Gly Asp Val Ile Arg Phe Ile Ala Leu Lys Pro Glu Glu  
                  305                 310                 315

&lt;210&gt;1053

&lt;211&gt;104

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1053

Arg Phe Ser Tyr Glu Ile Leu Pro Gly Gly Ser Arg Gly Trp Arg Ser  
       1                 5                 10                 15  
 Ser Ala Asn Leu Pro Ile Val Lys Val Leu Gln Glu Ile Tyr Ser Asp  
       20                 25                 30  
 Leu Tyr Asn Glu Glu Cys Leu Arg Leu Val Met Pro Ala Thr Ile Pro  
       35                 40                 45  
 Ile Gly Pro Leu Leu Gly Glu Ala Ala Gln Thr Ser Pro Ile Ile Cys  
       50                 55                 60  
 Gly Thr Ser Tyr Leu Ser Asp Asp Ile His Ala Ala Glu Glu His Phe  
       65                 70                 75                 80  
 Ser Met Asp Gln Leu Lys Lys Gly Phe Leu Ser Ile Cys Gln Leu Leu  
       85                 90                 95  
 Asp Lys Leu Pro Lys Ile Lys Glu  
       100

&lt;210&gt;1054

&lt;211&gt;393

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1054

Met Leu Asn His Ala Lys Lys His Ala Lys Pro Tyr Val Leu Ile Phe  
       1                 5                 10                 15  
 Phe Ser Thr Lys Asp Lys Leu Ser Tyr Cys Asp Ile Ile Phe Asn Asn  
       20                 25                 30  
 Cys Ser Gly Lys Pro Met Asn Leu Asp Ser Lys His Phe Asp Ile Asn  
       35                 40                 45  
 Ser Ala Asn Phe Leu Glu Glu Phe Ala Lys Phe Ile Ser Phe Pro Ser  
       50                 55                 60  
 Ile Ser Ala Asp Ser Asp His Leu Gln Asp Cys Glu Asn Cys Ala His  
       65                 70                 75                 80  
 Phe Leu Val Asp His Val Asn Lys Ile Phe Asp Val Glu Leu Trp Glu  
       85                 90                 95  
 Thr Pro Gly His Pro Pro Ile Ile Tyr Ala Ser Tyr Lys Ser Glu Asp  
       100                 105                 110  
 Pro Leu Ser Pro Thr Leu Met Leu Tyr Asn His Tyr Asp Val Gln Pro  
       115                 120                 125  
 Ala Gln Leu Ser Asp Gly Trp Lys Gly Asp Pro Phe Ile Leu Arg Glu  
       130                 135                 140  
 Glu Asn Gly Asn Leu Tyr Ala Arg Gly Ala Ser Asp Asn Lys Gly Gln  
       145                 150                 155                 160

Cys Phe Tyr Thr Leu Lys Ala Leu Gln His Tyr Tyr Glu Ser Gln Gly  
                   165                 170                 175  
 Asn Phe Pro Leu Asn Ile Ile Trp Leu Ile Glu Gly Glu Glu Ser  
                   180                 185                 190  
 Gly Ser Leu Ala Leu Phe Thr Trp Leu Glu Lys Lys Glu Ala Leu  
                   195                 200                 205  
 Arg Ala Asp Tyr Leu Leu Ile Val Asp Gly Gly Phe Leu Ser Glu Lys  
                   210                 215                 220  
 His Pro Tyr Val Ser Ile Gly Ala Arg Gly Ile Val Ser Met Lys Ile  
                   225                 230                 235                 240  
 Ser Leu Glu Glu Gly Asn Lys Asp Met His Ser Gly Val Leu Gly Gly  
                   245                 250                 255  
 Ile Ala Tyr Asn Thr Asn Arg Ala Leu Ser Glu Ile Leu Ser Ser Leu  
                   260                 265                 270  
 His His Pro Asp Asn Ser Ile Ala Ile Glu Gly Phe Tyr Asp Asp Leu  
                   275                 280                 285  
 Ala Leu Pro Ser Asp Ser Asp Arg Pro Asp Leu Pro Lys Ser Asp Thr  
                   290                 295                 300  
 Leu Arg Glu Cys Glu Glu Asn Leu Gly Phe Arg Pro Gln Gly Tyr Glu  
                   305                 310                 315                 320  
 Ala Ser Tyr Ser Pro Glu Glu Ser Ala Leu Arg Pro Thr Val Glu Ile  
                   325                 330                 335  
 Asn Gly Ile Ser Gly Gly Tyr Thr Gly Pro Gly Phe Lys Thr Val Ile  
                   340                 345                 350  
 Pro Tyr Arg Ala Thr Ala Tyr Leu Ser Cys Arg Leu Val Pro Asn Gln  
                   355                 360                 365  
 Asp Pro Asp Lys Ala Ala His Gln Val Ile His His Leu Lys Gln Gln  
                   370                 375                 380  
 Val Pro Ser Ser Leu Lys Val Leu Leu  
                   385                 390  
<210>1055  
<211>978  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1055

Val Thr Glu Ser Met Lys Ala Gly Asp Thr Tyr Arg Asn Phe Ile Ile  
        1                 5                 10                 15  
 Lys Ser Cys Lys Asp Leu Pro Glu Ile Glu Ser Lys Leu Leu Glu Ala  
        20                 25                 30  
 Glu His Lys Pro Thr Gly Ala Ser Ile Met Met Ile Val Asn Asn Asp  
        35                 40                 45  
 Glu Glu Asn Val Phe Asn Ile Cys Phe Arg Thr Cys Pro Gln Thr Ser  
        50                 55                 60  
 Asn Gly Val Ala His Val Leu Glu His Met Val Leu Cys Gly Ser Glu  
        65                 70                 75                 80  
 Asn Tyr Pro Val Arg Asp Pro Phe Phe Ser Met Thr Arg Arg Ser Leu  
        85                 90                 95  
 Asn Thr Phe Ile Asn Ala Phe Thr Gly Pro Asp Phe Thr Cys Tyr Pro  
        100                105                110  
 Ala Ala Ser Gln Ile Pro Glu Asp Phe Tyr Asn Leu Leu Ser Val Tyr  
        115                120                125  
 Ile Asp Ala Val Phe His Pro Leu Leu Thr Lys Gln Ser Phe Leu Gln  
        130                135                140  
 Glu Ala Trp Arg Tyr Glu Phe Asn Ser Glu Asn His Leu Cys Tyr Thr  
        145                150                155                 160  
 Gly Val Val Phe Asn Glu Met Lys Gly Ala Met Met Ser Gly Glu Ala  
        165                170                175  
 Arg Leu Ser Glu Ala Leu Asn Ala Ala Ile Phe Pro Ser Val Thr Tyr  
        180                185                190  
 Gly Val Asn Ser Gly Gly Glu Pro Arg Glu Ile Val Thr Leu Ser His  
        195                200                205  
 Glu Asp Val Arg Ala Phe His Gln Ser Gln Tyr Ser Ile Asn Arg Cys  
        210                215                220  
 Leu Phe Tyr Phe Tyr Gly Asn Ile Lys Pro Ser Arg His Leu Asp Phe

225	230	235	240													
Leu	Glu	Lys	Leu	Leu	Arg	Gln	Ala	Thr	Lys	Leu	Glu	Lys	Gln	Ala		
245		250												255		
Val	Ser	Val	Pro	Leu	Gln	Lys	Arg	Phe	Lys	Glu	Pro	Val	Arg	Asn	Ile	
260		265												270		
Leu	Thr	Tyr	Pro	Val	Asp	His	Gln	Glu	Glu	Asp	Lys	Val	Leu	Phe	Gly	
275		280												285		
Ile	Ser	Trp	Leu	Thr	Cys	Ser	Ile	Leu	Glu	Gln	Gln	Glu	Leu	Leu	Ala	
290		295												300		
Leu	His	Val	Leu	Glu	Ile	Ile	Leu	Met	Gly	Thr	Asp	Ala	Ser	Pro	Leu	
305		310												320		
Lys	Ser	Arg	Leu	Leu	Lys	Ser	Gly	Phe	Cys	Lys	Gln	Thr	Glu	Met	Ser	
325		330												335		
Ile	Glu	Asn	Asp	Ile	Arg	Glu	Ile	Pro	Met	Thr	Leu	Val	Cys	Lys	Gly	
340		345												350		
Cys	Ser	Pro	Ala	Gly	Ala	Gln	Lys	Leu	Glu	Ala	Leu	Ile	Phe	Ala	Ser	
355		360												365		
Leu	Glu	Glu	Ile	Ile	Arg	Glu	Gly	Ile	Ser	Glu	Asn	Ile	Val	Glu	Gly	
370		375												380		
Ala	Val	His	Gln	Leu	Glu	Leu	Ser	Arg	Lys	Glu	Ile	Thr	Gly	Tyr	Ser	
385		390												400		
Leu	Pro	Tyr	Gly	Leu	Ser	Leu	Phe	Phe	Arg	Ser	Gly	Leu	Leu	Lys	Gln	
405		410												415		
His	Gly	Gly	Ser	Ala	Glu	Asp	Gly	Leu	Arg	Ile	His	Asn	Leu	Phe	Ser	
420		425												430		
Glu	Leu	Arg	Asn	Ser	Leu	Lys	Asn	Ser	Asp	Tyr	Leu	Ala	Lys	Leu	Ile	
435		440												445		
Arg	Lys	Tyr	Phe	Leu	Asp	Asn	Pro	His	Phe	Ala	Arg	Val	Ile	Leu	Leu	
450		455												460		
Pro	Asp	Thr	Glu	Leu	Val	Ala	Lys	Asp	Asn	Lys	Asp	Glu	Gln	Gln	Leu	
465		470												480		
Leu	Leu	Ser	Val	Ser	Glu	Lys	Leu	Thr	Asp	Glu	Asn	Lys	Glu	Lys	Ile	
485		490												495		
Gln	Gln	Asn	Val	Arg	Glu	Leu	Thr	Glu	Ser	Gln	Glu	Gln	Lys	Glu	Asp	
500		505												510		
Leu	Asn	Gly	Ile	Leu	Pro	Asn	Leu	Ala	Leu	Asp	Lys	Val	Pro	Thr	Ser	
515		520												525		
Gly	Lys	Glu	Phe	Pro	Leu	Ile	Lys	Glu	Gly	Leu	Ser	Gln	Gly	Glu	Val	
530		535												540		
Leu	His	His	Glu	Cys	Phe	Thr	Asn	Asp	Ile	Val	Phe	Ile	Asp	Val	Val	
545		550												560		
Leu	Asp	Ile	Pro	Pro	Leu	Ser	Gly	Glu	Glu	Leu	Pro	Trp	Leu	Arg	Leu	
565		570												575		
Leu	Val	Phe	Leu	Met	Leu	Gln	Leu	Gly	Cys	Gly	Gly	Arg	Ser	Tyr	Lys	
580		585												590		
Glu	His	Leu	Glu	Phe	Leu	Leu	Glu	His	Thr	Gly	Gly	Val	Asp	Val	Ser	
595		600												605		
Tyr	Asp	Phe	Ser	Pro	His	Ala	Asn	Lys	Asn	Ser	Phe	Leu	Ser	Pro	Ser	
610		615												620		
Val	Ser	Ile	Arg	Gly	Lys	Ala	Leu	Ser	Ser	Lys	Ser	Glu	Lys	Leu	Cys	
625		630												640		
Gly	Ile	Val	Ser	Asp	Met	Leu	Thr	Ser	Val	Asp	Phe	Thr	Asp	Ile	Pro	
645		650												655		
Arg	Ile	Arg	Glu	Leu	Leu	Met	Gln	His	Asn	Glu	Ala	Leu	Thr	Asn	Ser	
660		665												670		
Val	Arg	Asn	Ser	Pro	Met	Ser	Tyr	Ala	Val	Ser	Met	Ala	Cys	Ser	Gly	
675		680												685		
Asn	Ser	Ile	Thr	Gly	Ala	Met	Ser	Tyr	Leu	Thr	Thr	Gly	Leu	Pro	Tyr	
690		695												700		
Val	Lys	Lys	Ile	Arg	Glu	Leu	Thr	Lys	Asn	Phe	Asp	Gln	Asn	Ile	Asp	
705		710												720		
Glu	Ala	Ala	Val	Val	Ile	Leu	Gln	Arg	Leu	Tyr	Thr	Lys	Cys	Phe	Ser	Gly
725		730												735		
Lys	Arg	Gln	Ile	Val	Ile	Ser	Gly	Ser	Ala	His	Asn	Tyr	Gln	Gln	Leu	

740	745	750
Lys Asp Asn Lys Phe Tyr Gly Leu	Leu Asp Tyr Leu Ile Val	Ile Pro
755	760	765
Glu Pro Trp Glu Asn Pro Ser Ile Asn Leu Tyr Val Thr Ser Arg Gly		
770	775	780
Leu His Ile Pro Ala Arg Ala Ala Phe Asn Ala Leu Ala Phe Pro Ile		
785	790	795
Gly Asp Ile Ala Tyr Asp His Pro Asp Ala Ala Ala Leu Thr Val Ala		
805	810	815
Ala Glu Ile Leu Asp Asn Val Val Leu His Thr Lys Ile Arg Glu Gln		
820	825	830
Gly Gly Ala Tyr Gly Ser Gly Ala Ala Ala Asn Leu Ser Arg Gly Ser		
835	840	845
Phe Tyr Cys Tyr Ser Tyr Arg Asp Pro Glu Ile Ala Thr Thr Tyr Lys		
850	855	860
Thr Phe Leu Lys Gly Val Ser Glu Ile Ala Ser Gly Asn Phe Thr Lys		
865	870	875
Glu Asp Ile Tyr Glu Gly Ala Leu Gly Val Val Gln Gly Leu Asp Met		
885	890	895
Pro Val Ala Pro Gly Ser Arg Ala Ser Val Ala Phe Tyr Arg Leu Lys		
900	905	910
Ser Gly Arg Ile Pro Val Leu Arg Gln Ala Phe Arg Arg Ser Val Leu		
915	920	925
Glu Val Thr Lys Glu His Ile Cys Met Val Met Asp Lys Tyr Leu Glu		
930	935	940
Ser Thr Val Gln Glu Thr Thr Leu Ile Ser Phe Ala Gly Glu Glu Met		
945	950	955
Leu Arg Asn Asn Val Leu Thr Leu Asp Lys Asp Phe Pro Ile Val Pro		
965	970	975
Ala Ile		

&lt;210&gt;1056

&lt;211&gt;418

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1056

Lys Lys Glu Leu Ala Ser Val Met Asn Leu Pro Val Ser Leu Ala Cys			
1	5	10	15
Leu Leu Leu Ser Gly Cys Val Phe Phe Leu Gly Val Phe Val Ser Ser			
20	25	30	
Ser Leu Tyr Ala Arg Lys Lys Arg Ala Phe Leu Glu Lys Ile Gln Lys			
35	40	45	
Leu Glu His Glu Asn Gln Leu Leu Gln Thr Ser Leu Asn Leu Ser Arg			
50	55	60	
His Gln Glu Gln Leu Ile Glu Asp Phe Ser Asn Arg Leu Ala Leu Ser			
65	70	75	80
Ser His Lys Leu Ile Lys Asp Met Lys Glu Glu Ala Gln Asn Tyr Phe			
85	90	95	
Gly Asp Thr Ser Lys Ser Phe Gln Ser Ile Leu Ser Pro Ile Gln Thr			
100	105	110	
Thr Leu Thr Thr Phe Lys Gln Ser Leu Glu Thr Phe Glu Thr Lys His			
115	120	125	
Ala Glu Asp Arg Gly Arg Leu Lys Glu Gln Ile Ser Gln Leu Leu Ala			
130	135	140	
Val Glu Lys Lys Leu Glu His Glu Thr His Val Leu Thr Asp Ile Leu			
145	150	155	160
Lys His Pro Gly Ser Arg Gly Arg Trp Gly Glu Ile Gln Leu Glu Arg			
165	170	175	
Ile Leu Glu Leu Ala Gly Met Leu Lys Tyr Cys Asp Tyr Asp Ser Gln			
180	185	190	
Thr Thr Ser Ala Gln Gly Ala Phe Arg Ala Asp Ile Ile Ile Arg Leu			
195	200	205	
Pro Gln Asp Arg Cys Leu Ile Ile Asp Ala Lys Ala Pro Ile Ser Asp			
210	215	220	

Ser Tyr Phe Ser Val Glu Glu Ile Asp Lys Gly Asp Leu Val Asp Lys  
 225                   230                   235                   240  
 Ile Lys Glu His Ile Lys Thr Leu Lys Ser Lys Ser Tyr Trp Glu Lys  
 245                   250                   255  
 Phe His Gln Ser Pro Glu Tyr Val Ile Leu Phe Leu Pro Gly Glu Ser  
 260                   265                   270  
 Leu Phe Asn Asp Ala Ile Arg Leu Ala Pro Glu Leu Met Glu Ile Gly  
 275                   280                   285  
 Ala Ser Ser Asn Val Ile Leu Ser Ser Pro Leu Thr Leu Leu Ala Leu  
 290                   295                   300  
 Leu Lys Thr Ile Ala Tyr Met Trp Lys Gln Glu Asn Leu Gln Lys Gln  
 305                   310                   315                   320  
 Ile Gln Glu Val Ser Leu Leu Gly Lys Glu Leu His Arg Arg Leu Gln  
 325                   330                   335  
 Val Val Phe Thr His Phe Gln Lys Ile Gly Lys Asn Leu Asn Gln Thr  
 340                   345                   350  
 Val Gln Ser Tyr Asn Asp Met Thr Ser Ser Phe Gln Tyr Arg Val Leu  
 355                   360                   365  
 Pro Thr Leu Arg Lys Phe Glu Gly Leu Glu Thr Ser Ser Ser His Gln  
 370                   375                   380  
 Ile Glu Glu Pro Thr Pro Ile Glu Ser Leu Ala Thr Ser Phe Pro His  
 385                   390                   395                   400  
 Thr Cys Asp Ile Asp Thr Asn Leu Ala Val Ile Glu Ser Leu Glu Lys  
 405                   410                   415  
 Gln Asp

&lt;210&gt;1057

&lt;211&gt;265

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1057

Met Ala Gly Leu Asp Leu Glu Ala Arg Gly Lys Arg Arg Val Val Thr  
 1                   5                   10                   15  
 Pro Asn Ala Ile Thr Ala Phe Gly Leu Cys Cys Gly Leu Phe Ile Ile  
 20                   25                   30  
 Phe Lys Ser Val Leu Arg Thr Ser Ser Ser Val Glu Leu Phe His Arg  
 35                   40                   45  
 Leu Gln Gly Leu Ser Leu Leu Ile Ser Ala Met Ile Ala Asp Phe  
 50                   55                   60  
 Ser Asp Gly Ala Ile Ala Arg Ile Met Lys Ala Glu Ser Ala Phe Gly  
 65                   70                   75                   80  
 Ala Gln Phe Asp Ser Leu Ser Asp Ala Val Thr Phe Gly Ile Ala Pro  
 85                   90                   95  
 Pro Leu Ile Ala Ile Lys Ser Leu Asp Gly Ile Tyr Val Gly Asn Phe  
 100                  105                  110  
 Phe Ser Ser Leu Leu Ile Thr Ser Ile Ile Tyr Ser Leu Cys Gly  
 115                  120                  125  
 Val Leu Arg Leu Val Arg Tyr Asn Leu Phe Ser Gln Lys Thr Val Asp  
 130                  135                  140  
 Val Ser Lys Pro Tyr Cys Phe Ile Gly Leu Pro Ile Pro Ala Ala Ala  
 145                  150                  155                  160  
 Ala Ser Ile Val Ser Leu Ala Leu Phe Leu Ala Ser Asp Phe Phe Pro  
 165                  170                  175  
 Asp Leu Pro Ala Gln Leu Arg Val Gly Leu Leu Ser Phe Ala Leu Leu  
 180                  185                  190  
 Phe Ile Gly Gly Leu Met Ile Ser Pro Trp Lys Phe Pro Gly Val Lys  
 195                  200                  205  
 His Phe Arg Phe Asn Val Ser Ser Phe Leu Leu Val Val Thr Ile Gly  
 210                  215                  220  
 Leu Ala Ala Cys Leu Phe Phe Ser Gly Leu Val Asp His Phe Val Glu  
 225                  230                  235                  240  
 Val Phe Phe Leu Val Ser Trp Leu Tyr Thr Leu Val Gly Phe Pro Ile  
 245                  250                  255  
 Phe Ser Ile Ile Tyr Arg Lys Lys Ser

260

265

<210>1058  
 <211>1047  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1058  
 Gly Lys Val Met Val Glu Val Glu Glu Lys His Tyr Thr Ile Val Lys  
 1 5 10 15  
 Arg Asn Gly Met Phe Val Pro Phe Asn Gln Asp Arg Ile Phe Gln Ala  
 20 25 30  
 Leu Glu Ala Ala Phe Arg Asp Thr Arg Ser Leu Glu Thr Ser Ser Pro  
 35 40 45  
 Leu Pro Lys Asp Leu Glu Glu Ser Ile Ala Gln Ile Thr His Lys Val  
 50 55 60  
 Val Lys Glu Val Leu Ala Lys Ile Ser Glu Gly Gln Val Val Thr Val  
 65 70 75 80  
 Glu Arg Ile Gln Asp Leu Val Glu Ser Gln Leu Tyr Ile Ser Gly Leu  
 85 90 95  
 Gln Asp Val Ala Arg Asp Tyr Ile Val Tyr Arg Asp Gln Arg Lys Ala  
 100 105 110  
 Glu Arg Gly Asn Ser Ser Ser Ile Ile Ala Ile Ile Arg Arg Asp Gly  
 115 120 125  
 Gly Ser Ala Lys Phe Asn Pro Met Lys Ile Ser Ala Ala Leu Glu Lys  
 130 135 140  
 Ala Phe Arg Ala Thr Leu Gln Ile Asn Gly Met Thr Pro Pro Ala Thr  
 145 150 155 160  
 Leu Ser Glu Ile Asn Asp Leu Thr Leu Arg Ile Val Glu Asp Val Leu  
 165 170 175  
 Ser Leu His Gly Glu Glu Ala Ile Asn Leu Glu Glu Ile Gln Asp Ile  
 180 185 190  
 Val Glu Lys Gln Leu Met Val Ala Gly Tyr Tyr Asp Val Ala Lys Asn  
 195 200 205  
 Tyr Ile Leu Tyr Arg Glu Ala Arg Ala Arg Ala Arg Ala Asn Lys Asp  
 210 215 220  
 Gln Asp Gly Gln Glu Glu Phe Val Pro Gln Glu Glu Thr Tyr Val Val  
 225 230 235 240  
 Gln Lys Glu Asp Gly Thr Thr Tyr Leu Leu Arg Lys Thr Asp Leu Glu  
 245 250 255  
 Lys Arg Phe Ser Trp Ala Cys Lys Arg Phe Pro Lys Thr Thr Asp Ser  
 260 265 270  
 Gln Leu Leu Ala Asp Met Ala Phe Met Asn Leu Tyr Ser Gly Ile Lys  
 275 280 285  
 Glu Asp Glu Val Thr Thr Ala Cys Ile Met Ala Ala Arg Ala Asn Ile  
 290 295 300  
 Glu Arg Glu Pro Asp Tyr Ala Phe Ile Ala Ala Glu Leu Leu Thr Ser  
 305 310 315 320  
 Ser Leu Tyr Glu Glu Thr Leu Gly Cys Ser Ser Gln Asp Pro Asn Leu  
 325 330 335  
 Ser Glu Ile His Lys Lys His Phe Lys Glu Tyr Ile Leu Asn Gly Glu  
 340 345 350  
 Glu Tyr Arg Leu Asn Pro Gln Leu Lys Asp Tyr Asp Leu Asp Ala Leu  
 355 360 365  
 Ser Glu Val Leu Asp Leu Ser Arg Asp Gln Gln Phe Ser Tyr Met Gly  
 370 375 380  
 Val Gln Asn Leu Tyr Asp Arg Tyr Phe Asn Leu His Glu Gly Arg Arg  
 385 390 395 400  
 Leu Glu Thr Ala Gln Ile Phe Trp Met Arg Val Ser Met Gly Leu Ala  
 405 410 415  
 Leu Asn Glu Gly Glu Gln Lys Asn Phe Trp Ala Ile Thr Phe Tyr Asn  
 420 425 430  
 Leu Leu Ser Thr Phe Arg Tyr Thr Pro Ala Thr Pro Thr Leu Phe Asn  
 435 440 445  
 Ser Gly Met Arg His Ser Gln Leu Ser Ser Cys Tyr Leu Ser Thr Val  
 450 455 460

Lys Asp Asp Leu Ser His Ile Tyr Lys Val Ile Ser Asp Asn Ala Leu  
 465 470 475 480  
 Leu Ser Lys Trp Ala Gly Gly Ile Gly Asn Asp Trp Thr Asp Val Arg  
 485 490 495  
 Ala Thr Gly Ala Val Ile Lys Gly Thr Asn Gly Lys Ser Gln Gly Val  
 500 505 510  
 Ile Pro Phe Ile Lys Val Ala Asn Asp Thr Ala Ile Ala Val Asn Gln  
 515 520 525  
 Gly Gly Lys Arg Lys Gly Ala Met Cys Val Tyr Leu Glu Asn Trp His  
 530 535 540  
 Leu Asp Tyr Glu Asp Phe Leu Glu Leu Arg Lys Asn Thr Gly Asp Glu  
 545 550 555 560  
 Arg Arg Arg Thr His Asp Ile Asn Thr Ala Ser Trp Ile Pro Asp Leu  
 565 570 575  
 Phe Phe Lys Arg Leu Glu Lys Lys Gly Met Trp Thr Leu Phe Ser Pro  
 580 585 590  
 Asp Asp Val Pro Gly Leu His Glu Ala Tyr Gly Leu Glu Phe Glu Lys  
 595 600 605  
 Leu Tyr Glu Glu Tyr Glu Arg Lys Val Glu Ser Gly Glu Ile Arg Leu  
 610 615 620  
 Tyr Lys Lys Val Glu Ala Glu Val Leu Trp Arg Lys Met Leu Ser Met  
 625 630 635 640  
 Leu Tyr Glu Thr Gly His Pro Trp Ile Thr Phe Lys Asp Pro Ser Asn  
 645 650 655  
 Ile Arg Ser Asn Gln Asp His Val Gly Val Val Arg Cys Ser Asn Leu  
 660 665 670  
 Cys Thr Glu Ile Leu Leu Asn Cys Ser Glu Ser Glu Thr Ala Val Cys  
 675 680 685  
 Asn Leu Gly Ser Ile Asn Leu Val Glu His Ile Arg Asn Asp Lys Leu  
 690 695 700  
 Asp Glu Glu Lys Leu Lys Glu Thr Ile Ser Ile Ala Ile Arg Ile Leu  
 705 710 715 720  
 Asp Asn Val Ile Asp Leu Asn Phe Tyr Pro Thr Pro Glu Ala Lys Gln  
 725 730 735  
 Ala Asn Leu Thr His Arg Ala Val Gly Leu Gly Val Met Gly Phe Gln  
 740 745 750  
 Asp Val Leu Tyr Glu Leu Asn Ile Ser Tyr Ala Ser Gln Glu Ala Val  
 755 760 765  
 Glu Phe Ser Asp Glu Cys Ser Glu Ile Ile Ala Tyr Tyr Ala Ile Leu  
 770 775 780  
 Ala Ser Ser Leu Leu Ala Lys Glu Arg Gly Thr Tyr Ala Ser Tyr Ser  
 785 790 795 800  
 Gly Ser Lys Trp Asp Arg Gly Tyr Leu Pro Leu Asp Thr Ile Glu Leu  
 805 810 815  
 Leu Lys Glu Thr Arg Gly Glu His Asn Val Leu Val Asp Thr Ser Ser  
 820 825 830  
 Lys Lys Asp Trp Thr Pro Val Arg Asp Thr Ile Gln Lys Tyr Gly Met  
 835 840 845  
 Arg Asn Ser Gln Val Met Ala Ile Ala Pro Thr Ala Thr Ile Ser Asn  
 850 855 860  
 Ile Ile Gly Val Thr Gln Ser Ile Glu Pro Met Tyr Lys His Leu Phe  
 865 870 875 880  
 Val Lys Ser Asn Leu Ser Gly Glu Phe Thr Ile Pro Asn Thr Tyr Leu  
 885 890 895  
 Ile Lys Lys Leu Lys Glu Leu Gly Leu Trp Asp Ala Glu Met Leu Asp  
 900 905 910  
 Asp Leu Lys Tyr Phe Asp Gly Ser Leu Leu Glu Ile Glu Arg Ile Pro  
 915 920 925  
 Asn His Leu Lys Lys Leu Phe Leu Thr Ala Phe Glu Ile Glu Pro Glu  
 930 935 940  
 Trp Ile Ile Glu Cys Thr Ser Arg Arg Gln Lys Trp Ile Asp Met Gly  
 945 950 955 960  
 Val Ser Leu Asn Leu Tyr Leu Ala Glu Pro Asp Gly Lys Lys Leu Ser  
 965 970 975

Asn Met Tyr Leu Thr Ala Trp Lys Lys Gly Leu Lys Thr Thr Tyr Tyr  
 980 985 990  
 Leu Arg Ser Gln Ala Ala Thr Ser Val Glu Lys Ser Phe Ile Asp Ile  
 995 1000 1005  
 Asn Lys Arg Gly Ile Gln Pro Arg Trp Met Lys Asn Lys Ser Ala Ser  
 1010 1015 1020  
 Thr Ser Ile Val Val Glu Arg Lys Thr Thr Pro Val Cys Ser Met Glu  
 1025 1030 1035 1040  
 Glu Gly Cys Glu Ser Cys Gln  
 1045  
 <210>1059  
 <211>365  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1059  
 Leu Phe Asn Gly Arg Arg Leu Arg Ile Leu Ser Ile Thr Glu Lys Arg  
 1 5 10 15  
 Gly Ala Lys Met Glu Ala Asp Ile Leu Asp Gly Lys Leu Lys Arg Val  
 20 25 30  
 Glu Val Ser Lys Lys Gly Leu Val Asn Cys Asn Gln Val Asp Val Asn  
 35 40 45  
 Gln Leu Val Pro Ile Lys Tyr Lys Trp Ala Trp Glu His Tyr Leu Asn  
 50 55 60  
 Gly Cys Ala Asn Asn Trp Leu Pro Thr Glu Val Pro Met Ala Arg Asp  
 65 70 75 80  
 Ile Glu Leu Trp Lys Ser Asp Glu Leu Ser Glu Asp Glu Arg Arg Val  
 85 90 95  
 Ile Leu Leu Asn Leu Gly Phe Phe Ser Thr Ala Glu Ser Leu Val Gly  
 100 105 110  
 Asn Asn Ile Val Leu Ala Ile Phe Lys His Ile Thr Asn Pro Glu Ala  
 115 120 125  
 Arg Gln Tyr Leu Leu Arg Gln Ala Phe Glu Glu Ala Val His Thr His  
 130 135 140  
 Thr Phe Leu Tyr Ile Cys Glu Ser Leu Gly Leu Asp Glu Gly Glu Val  
 145 150 155 160  
 Phe Asn Ala Tyr Asn Glu Arg Ala Ser Ile Arg Ala Lys Asp Asp Phe  
 165 170 175  
 Gln Met Thr Leu Thr Val Asp Val Leu Asp Pro Asn Phe Ser Val Gln  
 180 185 190  
 Ser Ser Glu Gly Leu Gly Gln Phe Ile Lys Asn Leu Val Gly Tyr Tyr  
 195 200 205  
 Ile Ile Met Glu Gly Ile Phe Phe Tyr Ser Gly Phe Val Met Ile Leu  
 210 215 220  
 Ser Phe His Arg Gln Asn Lys Met Thr Gly Ile Gly Glu Gln Tyr Gln  
 225 230 235 240  
 Tyr Ile Leu Arg Asp Glu Thr Ile His Leu Asn Phe Gly Ile Asp Leu  
 245 250 255  
 Ile Asn Gly Ile Lys Glu Glu Asn Pro Glu Val Trp Thr Glu Leu  
 260 265 270  
 Gln Glu Glu Ile Val Ala Leu Ile Glu Lys Ala Val Glu Leu Glu Ile  
 275 280 285  
 Glu Tyr Ala Lys Asp Cys Leu Pro Arg Gly Ile Leu Gly Leu Arg Ser  
 290 295 300  
 Ser Met Phe Ile Asp Tyr Val Arg His Ile Ala Asp Arg Arg Leu Glu  
 305 310 315 320  
 Arg Ile Gly Leu Lys Pro Ile Tyr His Ser Arg Asn Pro Phe Pro Trp  
 325 330 335  
 Met Ser Glu Thr Met Asp Leu Asn Lys Glu Lys Asn Phe Phe Glu Thr  
 340 345 350  
 Arg Val Thr Glu Tyr Gln Thr Ala Gly Asn Leu Ser Trp  
 355 360 365  
 <210>1060  
 <211>228  
 <212>PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1060

Phe	Leu	Leu	Phe	Met	Lys	Pro	Gln	Asp	Leu	Ser	Pro	Pro	Phe	Leu	Trp
1				5					10				15		
Lys	Glu	Arg	Arg	Pro	Cys	Ile	Gln	Asp	Gly	Val	Leu	Tyr	Val	Pro	Arg
						20			25				30		
His	Tyr	Phe	Glu	His	Gln	Asn	Phe	Ser	Thr	Ser	Tyr	His	Gln	Glu	Phe
						35			40			45			
Phe	Gln	Asn	His	Thr	Ser	Ile	Ala	Cys	Glu	Leu	Cys	Ser	Gly	Asn	Gly
							50		55		60				
Asp	Trp	Val	Val	Ala	Gln	Ala	Lys	Asp	Pro	Gln	Val	Leu	Trp	Ile	
							65		70		75		80		
Ala	Val	Glu	Gln	Arg	Phe	Asp	Arg	Val	Arg	Lys	Ile	Trp	Ser	Lys	Met
							85		90		95				
Ile	Asn	His	Gln	Ile	Gln	Asn	Leu	Arg	Ile	Val	Cys	Gly	Thr	Ala	Glu
							100		105		110				
Thr	Phe	Phe	Gln	Tyr	Tyr	Val	Pro	Asp	Gln	Phe	Leu	Gln	Arg	Leu	Val
							115		120		125				
Val	Asn	Phe	Pro	Asp	Pro	Trp	Pro	Lys	Met	Arg	His	Arg	Lys	His	Arg
							130		135		140				
Leu	Leu	Gln	Pro	Ser	Phe	Val	Gln	Glu	Ile	Ser	Arg	Ser	Leu	Gln	Asp
							145		150		155		160		
Ser	Ala	Val	Phe	Ala	Leu	Ala	Thr	Asp	Asp	Lys	Thr	Tyr	Leu	Leu	Glu
							165		170		175				
Ser	Ile	Glu	Ala	Leu	Gln	Thr	His	Leu	Ala	Pro	Arg	Met	Glu	Thr	Pro
							180		185		190				
Tyr	Tyr	Ile	Lys	Met	Thr	Asp	Thr	Tyr	Gly	Asn	Ser	Trp	Phe	Glu	Asn
							195		200		205				
Leu	Trp	Arg	Thr	Lys	Gly	Gln	Glu	Ile	Phe	Tyr	Thr	Glu	Phe	Ile	Lys
							210		215		220				
Lys	Ala	Gly	Ile												
							225								

&lt;210&gt;1061

&lt;211&gt;175

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1061

Met	Phe	Ala	Tyr	Arg	Thr	Leu	Leu	Thr	His	Asn	Val	Val	Gln	Val	Ser
1						5			10				15		
His	Glu	Ile	Phe	Lys	Thr	Thr	Val	Val	Pro	Gly	Asp	Thr	Val	Ile	Asp
						20			25			30			
Ala	Thr	Cys	Gly	Asn	Gly	Asn	Asp	Ser	Leu	Phe	Leu	Ala	Arg	Leu	Leu
						35			40			45			
Gln	Gly	Glu	Gly	Arg	Leu	Val	Val	Tyr	Asp	Ile	Gln	Lys	Glu	Ala	Leu
						50			55			60			
Ser	Asn	Ala	Leu	Leu	Leu	Phe	Glu	Thr	His	Leu	Ser	Glu	Gln	Glu	Arg
						65			70			75		80	
Ser	Val	Ile	Glu	Met	Lys	Glu	Gln	Ser	His	Glu	His	Ile	Leu	Glu	Lys
						85			90			95			
Asp	Val	Lys	Leu	Ile	His	Tyr	Asn	Leu	Gly	Tyr	Leu	Pro	Lys	Gly	Asn
						100			105			110			
Lys	Glu	Ile	Thr	Thr	Leu	Ala	Arg	Thr	Thr	Glu	Ile	Ser	Leu	Glu	Tyr
						115			120			125			
Ala	Leu	Asn	Ile	Val	Arg	Pro	Asp	Gly	Leu	Ile	Thr	Val	Val	Cys	Tyr
						130			135			140			
Pro	Gly	His	Pro	Glu	Gly	Glu	Lys	Glu	Thr	His	Ser	Val	Glu	Ser	Leu
						145			150			155		160	
Ala	Gln	Arg	Leu	His	Pro	Lys	Glu	Trp	Cys	Val	Ser	His	Phe	Met	
						165			170			175			

&lt;210&gt;1062

&lt;211&gt;97

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1062

Arg Ser Pro Ile Arg Ser Leu Leu Leu Ala Val Phe Ser Val Ile Leu  
 1 5 10 15  
 Lys Glu Leu Leu Ala Ser Leu Leu Thr Gln Pro Gly Leu Lys Gly  
 20 25 30  
 Leu Ala Ile Gly Gly Ala Gln Ile Ser Pro Leu His Ala Asn Phe Ile  
 35 40 45  
 Ile Asn Thr Gly Lys Ala Thr Ser Asp Glu Val Lys Gln Leu Ile Ala  
 50 55 60  
 Ile Ile Gln Ser Thr Leu Lys Thr Gln Gly Ile Asp Leu Glu His Glu  
 65 70 75 80  
 Ile Arg Ile Ile Pro Tyr Gln Pro Lys Ile His Ser Pro Val Ser Glu  
 85 90 95  
 Lys

&lt;210&gt;1063

&lt;211&gt;263

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1063

Met Lys Glu Ala Ala Pro Met His Phe Pro Phe Pro Val Arg Arg Ser  
 1 5 10 15  
 Val Trp Leu Asn Arg Tyr Ser Thr Phe Arg Ile Gly Gly Pro Ala Asn  
 20 25 30  
 Tyr Phe Lys Ala Ile His Thr Ile Glu Glu Ala Arg Glu Val Ile Arg  
 35 40 45  
 Phe Leu His Ser Ile Asn Tyr Pro Phe Leu Ile Ile Gly Lys Gly Ser  
 50 55 60  
 Asn Cys Leu Phe Asp Asp Arg Gly Phe Asp Gly Phe Val Leu Tyr Asn  
 65 70 75 80  
 Ala Ile Tyr Gly Lys Gln Phe Leu Glu Asp Ala Arg Ile Lys Ala Tyr  
 85 90 95  
 Ser Gly Leu Ser Phe Ala Ala Leu Gly Lys Ala Thr Ala Tyr Asn Gly  
 100 105 110  
 Tyr Ser Gly Leu Glu Phe Ala Ala Gly Ile Pro Gly Ser Val Gly Gly  
 115 120 125  
 Ala Ile Phe Met Asn Ala Gly Thr Asn Glu Ser Asp Ile Ser Ser Val  
 130 135 140  
 Val Arg Asn Val Glu Thr Ile Asn Ser Glu Gly Glu Leu Cys Ser Tyr  
 145 150 155 160  
 Ser Val Glu Glu Leu Glu Leu Ser Tyr Arg Ser Ser Arg Phe His Arg  
 165 170 175  
 Gln Gln Glu Phe Ile Leu Ser Ala Thr Phe Gln Leu Ser Lys Lys Gln  
 180 185 190  
 Val Ser Ala Asp His Ser Lys Ser Ile Leu Gln His Arg Leu Met Thr  
 195 200 205  
 Gln Pro Tyr Thr Gln Pro Ser Ala Gly Cys Ile Phe Arg Asn Pro Glu  
 210 215 220  
 Gly Thr Ser Ala Gly Lys Leu Ile Asp Ala Ala Trp Val Glu Gly Ile  
 225 230 235 240  
 Ser Asn Arg Arg Gly Thr Asn Phe Ser Val Ala Cys Lys Leu His Tyr  
 245 250 255  
 Gln Tyr Trp Gln Gly His Phe  
 260

&lt;210&gt;1064

&lt;211&gt;179

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1064

Leu Arg Thr Ser Leu Ala Val Lys Cys Val Leu Leu Thr Ile Phe Trp  
 1 5 10 15  
 Leu Leu Val Met Ala Thr Leu Ser Pro Glu Lys Phe Ser Gly Ser Pro  
 20 25 30  
 Ile Ser Ile Ser Lys Glu Phe Pro Gln Gln Lys Met Arg Glu Ile Ile  
 35 40 45

Leu Gln Met Leu        Ala Leu Asp Met Ala Pro Ser Al Glu Asp Ser  
   50                    55                    60  
 Leu Val Pro Leu Leu Met Ser Gln Thr Ala Val Ser Gln Lys His Val  
   65                    70                    75                    80  
 Leu Val Ala Leu Asn Gln Thr Lys Ser Ile Leu Glu Lys Ser Gln Glu  
   85                    90                    95  
 Leu Asp Leu Ile Ile Gly Asn Ala Leu Lys Asn Lys Ser Phe Asp Ser  
   100                  105                  110  
 Leu Asp Leu Val Glu Lys Asn Val Leu Arg Leu Thr Leu Phe Glu His  
   115                  120                  125  
 Phe Tyr Ser Pro Pro Ile Asn Lys Ala Ile Leu Ile Ala Glu Ala Ile  
   130                  135                  140  
 Arg Leu Val Lys Lys Phe Ser Tyr Ser Glu Ala Cys Pro Phe Ile Gln  
   145                  150                  155                  160  
 Ala Ile Leu Asn Asp Ile Phe Thr Asp Ser Ser Leu Asn Glu Asn Ser  
   165                  170                  175  
 Leu Ser Ile

&lt;210&gt;1065

&lt;211&gt;187

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1065

Ser Val Ala Leu Asn Phe Lys Ile Asn Arg Gln Ile Arg Ala Pro Lys  
   1                    5                    10                    15  
 Val Arg Leu Ile Gly Ser Ala Gly Glu Gln Leu Gly Ile Leu Ala Ile  
   20                  25                  30  
 Lys Asp Ala Leu Asp Leu Ala Arg Glu Ala Gly Leu Asp Leu Val Glu  
   35                  40                  45  
 Val Ala Ser Asn Ser Glu Pro Pro Val Cys Lys Ile Met Asp Tyr Gly  
   50                  55                  60  
 Lys Tyr Arg Tyr Gly Leu Thr Lys Lys Glu Lys Asp Ser Lys Lys Ala  
   65                  70                  75                  80  
 Gln His Gln Val Arg Ile Lys Glu Val Lys Leu Lys Pro Asn Ile Asp  
   85                  90                  95  
 Glu Asn Asp Phe Ser Thr Lys Leu Lys Gln Ala Arg Thr Phe Val Glu  
   100                105                110  
 Lys Gly Asn Lys Val Lys Ile Thr Cys Met Phe Arg Gly Arg Glu Leu  
   115                120                125  
 Ala Tyr Pro Glu His Gly Phe Lys Val Val Gln Lys Met Ser Gln Gly  
   130                135                140  
 Leu Glu Asp Ile Gly Phe Val Glu Ala Glu Pro Lys Leu Ala Gly Arg  
   145                150                155                160  
 Ser Leu Ile Cys Val Val Ala Pro Gly Thr Val Lys Thr Lys Lys Lys  
   165                170                175  
 Gln Glu Lys Ser His Ala Gln Asp Glu Asn Gln  
   180                185

&lt;210&gt;1066

&lt;211&gt;121

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1066

Met Val Arg Ala Thr Gly Ser Val Ala Ser Arg Arg Arg Arg Lys Arg  
   1                    5                    10                    15  
 Ile Leu Lys Gln Ala Lys Gly Phe Trp Gly Asp Arg Lys Gly His Ile  
   20                  25                  30  
 Arg Gln Ser Arg Ser Ser Val Met Arg Ala Met Ala Phe Asn Tyr Met  
   35                  40                  45  
 His Arg Lys Asp Arg Lys Gly Asp Phe Arg Ser Leu Trp Ile Ala Arg  
   50                  55                  60  
 Leu Asn Val Ala Ser Arg Ile His Ser Leu Ser Tyr Ser Arg Leu Ile  
   65                  70                  75                  80  
 Asn Gly Leu Lys Cys Ala Asn Ile Ser Leu Asn Arg Lys Met Leu Ser  
   85                  90                  95

Glu Ile Ala Ile His Asn Pro Glu Gly Phe Ala Glu Ile Ala Asn Gln  
                   100                  105                  110  
 Ala Lys Lys Ala Leu Glu Ala Thr Val  
                   115                  120  
<210>1067  
<211>339  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1067  
 Met Glu Met Lys Glu Glu Ile Glu Ala Val Lys Gln Gln Phe His Ser  
     1              5              10                  15  
 Glu Leu Asp Gln Val Asn Ser Ser Gln Ala Leu Ala Asp Leu Lys Val  
     20              25              30  
 Arg Tyr Leu Gly Lys Lys Gly Ile Phe Arg Ser Phe Ser Glu Lys Leu  
     35              40              45  
 Lys Gln Cys Thr Asp Lys Ala Lys Leu Gly Ser Leu Ile Asn Asp Phe  
     50              55              60  
 Lys Thr Tyr Val Glu Asp Leu Leu Gln Glu Lys Ser Leu Val Leu Leu  
     65              70              75                  80  
 Ala Ser Glu Gln Ala Glu Ala Phe Ser Lys Glu Lys Ile Asp Ser Ser  
     85              90              95  
 Leu Pro Gly Asp Ser Gln Pro Ser Gly Gly Arg His Ile Leu Lys Ser  
     100            105              110  
 Ile Leu Asp Asp Val Val Asp Ile Phe Val His Leu Gly Phe Cys Val  
     115            120              125  
 Arg Glu Ala Pro Asn Ile Glu Ser Glu Ala Asn Asn Phe Thr Leu Leu  
     130            135              140  
 Asn Phe Thr Glu Asp His Pro Ala Arg Gln Met His Asp Thr Phe Tyr  
     145            150              155                  160  
 Leu Asn Ala Thr Thr Val Leu Arg Thr His Thr Ser Asn Val Gln Ala  
     165            170              175  
 Arg Glu Leu Lys Lys Gln Gln Pro Pro Ile Lys Val Val Ala Pro Gly  
     180            185              190  
 Leu Cys Phe Arg Asn Glu Asp Ile Ser Ala Arg Ser His Val Leu Phe  
     195            200              205  
 His Gln Val Glu Ala Phe Tyr Val Asp His Asn Val Thr Phe Ser Asp  
     210            215              220  
 Leu Thr Ala Ile Leu Ser Ala Phe Tyr His Ser Phe Phe Gln Arg Lys  
     225            230              235                  240  
 Thr Glu Leu Arg Phe Arg His Ser Tyr Phe Pro Phe Val Glu Pro Gly  
     245            250              255  
 Ile Glu Val Asp Val Ser Cys Glu Cys Cys Gly Lys Gly Cys Ala Leu  
     260            265              270  
 Cys Lys His Thr Gly Trp Leu Glu Val Ala Gly Ala Gly Met Ile His  
     275            280              285  
 Pro Gln Val Leu Arg Asn Gly Asn Val Asp Pro Glu Ile Tyr Ser Gly  
     290            295              300  
 Tyr Ala Val Gly Met Gly Ile Glu Arg Leu Ala Met Leu Lys Tyr Gly  
     305            310              315                  320  
 Val Ser Asp Ile Arg Leu Phe Ser Glu Asn Asp Leu Arg Phe Leu Gln  
     325            330              335  
 Gln Phe Ser

<210>1068  
<211>690  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1068  
 Leu Phe Trp Phe His Arg Gly Gly Arg Met Lys Arg Ser Arg Arg Asn  
     1              5              10                  15  
 Phe Glu Gln Ala Leu Glu Asn Leu Glu Lys Leu Lys Glu Ile Ser Leu  
     20              25              30  
 Ala Thr Ser Asn Asp Ser Tyr Leu Asn Asn Pro Ala Arg Phe Asn Gln  
     35              40              45

Arg Lys Gln Thr Gly Ser Ser Val Met Glu Met Lys Glu Ala Leu Lys  
 50 55 60  
 Asn Val Glu Asn Tyr Leu Leu Glu Ile Ser Cys Val Ser Lys Ser His  
 65 70 75 80  
 Ala Asp Lys Ala Leu Lys Glu Ser Asp Phe Leu Ile Ala Gly Val Gln  
 85 90 95  
 Asn Val Phe Ser Phe Leu Glu Asn Gln Glu Asp Leu Tyr Lys Ser Leu  
 100 105 110  
 Leu Asp Glu Tyr Ser Glu Val Thr Lys Ala Tyr Asp Glu Val Lys Lys  
 115 120 125  
 Asn Leu Lys Glu Val Pro Thr Tyr Asp Leu Ser Thr Asp Glu Glu Thr  
 130 135 140  
 Glu Glu His Lys Glu Pro Glu Cys Phe Leu Asn Asn Leu Val Glu Val  
 145 150 155 160  
 Lys Arg Asp Arg Ser Tyr Glu Leu Phe Tyr Met Leu Asp Glu Gln Asp  
 165 170 175  
 Lys Arg Phe Tyr Asn Asp Ala Leu Val Gln Ile Ile Tyr Lys Gln Asn  
 180 185 190  
 Lys Leu His Glu Thr Val Asn Glu Gly Asp Pro Leu Thr Lys Thr Leu  
 195 200 205  
 Leu Trp Asn Ser Glu Glu Val Lys Asn Ile Ala Ser Ser Leu Val Ile  
 210 215 220  
 Val Asn Asp Met Pro Leu Arg Leu Phe Tyr Gln Arg Ala Leu Ser His  
 225 230 235 240  
 Leu Asp Ile Glu Ala Val Val Lys Val His Asn Ala Val Met Ala Leu  
 245 250 255  
 Phe Phe Ser Arg Tyr Glu Ala Thr Met Val Phe Lys Ser Pro Lys Lys  
 260 265 270  
 His Asn Ile Trp Tyr Phe Asn Asp Phe Leu Leu Phe Leu Arg Glu Ala  
 275 280 285  
 Trp Lys Asp Leu Asn Asn Val Ile Asp Ser Gln Glu Arg Lys Gln  
 290 295 300  
 Thr Lys Leu Leu Ala Ser Ala Leu Ser Leu Gly Ile Phe Glu Ser Lys  
 305 310 315 320  
 Leu Val Phe Glu Glu Ala Ser Arg Tyr Leu Tyr Phe Asn Ile Gln Thr  
 325 330 335  
 Lys Leu Glu Asn Ala Asn Gly Lys Lys Pro Leu Ser Pro Gly Gln Tyr  
 340 345 350  
 Leu Thr Asp Ala Tyr Glu Glu Leu His Arg Leu Ile Ser Lys Tyr Pro  
 355 360 365  
 Asn Gly Pro Leu Phe Lys Ala Met Asp Arg Val Leu Glu His Glu Ser  
 370 375 380  
 Arg Pro Tyr Asp Pro Met Ile Leu Gly Ile Leu Pro Ser Leu Glu Gly  
 385 390 395 400  
 Thr Leu Lys Leu His Gly Lys Ser Ile Asp Ile Ile Arg Ser Pro Ser  
 405 410 415  
 Pro Val Thr Gln Ser Ser Ile Leu Tyr Ala Asn Cys Asn Glu Glu Phe  
 420 425 430  
 Leu Gly Phe Leu Asn Ala Lys Ala His Arg Ser Glu Val Thr Leu Val  
 435 440 445  
 Leu Asn Ile Gln Asn Arg Ile Ser Arg Lys Glu Arg Ala Arg Ser Arg  
 450 455 460  
 Val Ile Glu Glu Ala Leu Glu Gln Glu Glu His Ala Pro Tyr Val His  
 465 470 475 480  
 Ala Phe Ser Phe Pro Glu Pro Glu Glu Leu Leu Gln Asn Leu Glu Ser  
 485 490 495  
 Ile His Gly Asp Ile Glu Thr Phe Ala Asp Phe Phe Ser Ile Leu Gln  
 500 505 510  
 Glu Glu Phe His Lys Pro Leu Leu Ala Ser Ser Phe Phe Leu Thr Lys  
 515 520 525  
 Glu Leu Lys Glu Phe Val Gly Ser Phe Leu Lys Glu Lys Leu Thr Ala  
 530 535 540  
 Leu Lys Asp Ile Phe Phe Ala Lys Lys Ile Leu Phe Arg Asn Asp  
 545 550 555 560

Lys Leu Leu Leu Leu His Leu Leu Ser Tyr Leu Ile Val Phe Lys Leu  
                   565                     570                     575  
 Ile Glu Arg Thr Asn Pro Asn Ser Ile Val Val Val Ser Lys Asp Gly  
                   580                     585                     590  
 Leu Asp Tyr Val Ser Val Phe Ile Ala Gly Phe Ala Phe Phe Ser Arg  
                   595                     600                     605  
 Glu Ala Phe Trp Asp Glu His Ser Leu Lys Leu Leu Leu Thr Asn Val  
                   610                     615                     620  
 Leu Ser Pro Thr Leu Val Ala Arg Asp Arg Leu Val Phe Val Ser His  
                   625                     630                     635                     640  
 Ile Glu Leu Leu Ser Lys Phe Val Asn Cys Leu Lys Lys Asn Arg Gln  
                   645                     650                     655  
 Gly Phe Ser Ser Leu Lys Ser Phe Phe Lys Asp Asp Ile Glu Gly Trp  
                   660                     665                     670  
 Glu Phe Thr Gly Tyr Leu His Glu Leu Thr Glu Val Ser His Lys His  
                   675                     680                     685

Asn Leu  
       690  
 <210>1069  
 <211>367  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1069

Arg Met Leu Ile Trp Lys Arg His Leu Leu Thr Arg Phe Trp Phe Ala  
     1                     5                     10                     15  
 Leu Thr Ser Leu Leu Val Leu Ala Leu Ile Phe Tyr Ala Ser Ile His  
     20                     25                     30  
 His Ser Leu His Thr Leu Lys Gly Ala Ser Thr Ala Ala Ser Gly Ala  
     35                     40                     45  
 Ser Val Lys Leu Ser Ile Leu Tyr Tyr Leu Ala Gln Ile Ser Leu Lys  
     50                     55                     60  
 Ala Glu Phe Leu Met Pro Gln Leu Val Ala Val Ala Thr Thr Ser Thr  
     65                     70                     75                     80  
 Leu Phe Ala Met Gln Asn Lys Arg Glu Ile Ile Leu Leu Gln Ala Ser  
     85                     90                     95  
 Gly Leu Ser Leu Lys Ser Leu Met His Pro Leu Leu Leu Ser Gly Ala  
     100                     105                     110  
 Val Ile Met Met Val Leu Tyr Ala Asn Phe Gln Trp Leu His Pro Ile  
     115                     120                     125  
 Cys Glu Lys Ile Ser Ile Thr Lys Glu Asn Met Asp Arg Gly Thr Thr  
     130                     135                     140  
 Asp Lys Glu Gln Gly Lys Ile Pro Ala Leu Tyr Leu Lys Asp Gln Thr  
     145                     150                     155                     160  
 Val Leu Leu Tyr Ser Ser Ile Glu Pro Lys Thr Leu Thr Leu Asn Asn  
     165                     170                     175  
 Val Phe Trp Ile Lys Asp Pro Lys Thr Ile Tyr Thr Met Glu Lys Leu  
     180                     185                     190  
 Ala Phe Thr Thr Leu Ser Leu Pro Ile Gly Leu Asn Val Thr Gln Phe  
     195                     200                     205  
 Phe Ala Asn Asp Ser Glu Asn Leu Glu Leu Lys Glu Phe Phe Asp Met  
     210                     215                     220  
 Lys Glu Phe Pro Glu Ile Glu Phe Asn Phe Tyr Glu Asn Pro Phe Ser  
     225                     230                     235                     240  
 Lys Leu Phe Ser Ala Gly Asn Lys Asn Arg Leu Ser Glu Phe Phe Lys  
     245                     250                     255  
 Ala Ile Pro Trp Asn Ala Thr Gly Leu Gly Leu Ser Thr Gln Val Pro  
     260                     265                     270  
 Gln Arg Ile Leu Ser Leu Leu Ala Gln Phe Tyr Tyr Val Leu Ile Ser  
     275                     280                     285  
 Pro Leu Ala Cys Met Ala Ala Ile Ile Leu Ser Ala Tyr Leu Cys Leu  
     290                     295                     300  
 Arg Phe Ser Arg Thr Pro Thr Val Thr Leu Ala Tyr Leu Ile Pro Leu  
     305                     310                     315                     320  
 Gly Thr Val Asn Ile Phe Phe Val Phe Leu Lys Ala Gly Ile Val Leu

	330	335
Ala Ser Ser Ser Val Leu Pro Thr Leu Pro Val Met Ala Phe Pro Leu		
340	345	350
Ile Val Leu Phe Leu Leu Thr Asn Tyr Ala Tyr Ala Lys Leu Gln		
355	360	365
<210>1070		
<211>358		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1070		
Ala Met Pro Ile Leu Trp Lys Val Leu Ile Phe Arg Tyr Leu Lys Thr		
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Ala Ala Phe Cys Thr Leu Ser Leu Ile Cys Ile Ser Ile Ile Ser Ser		
20	25	30
Leu Gln Glu Ile Val Ala Tyr Ile Ala Lys Asp Val Pro Tyr Asp Thr		
35	40	45
Val Leu Arg Leu Met Ala Tyr Gln Ile Pro Tyr Leu Leu Pro Phe Ile		
50	55	60
Leu Pro Gly Ser Cys Phe Val Ser Ala Phe Ser Leu Phe Arg Lys Leu		
65	70	75
Ser Asp Asn Asn His Met Thr Phe Leu Arg Ala Ser Gly Ala Ser Gln		
85	90	95
Ser Ile Ile Met Phe Pro Val Leu Met Val Ser Gly Ala Ile Cys Cys		
100	105	110
Leu Asn Phe Tyr Thr Cys Ser Glu Leu Ala Ser Ile Cys Arg Tyr Gln		
115	120	125
Thr Cys Lys Glu Ile Ala Asn Met Ala Met Thr Ser Pro Ala Leu Leu		
130	135	140
Leu Gln Thr Leu Gln Lys Lys Glu Asn Asn Arg Ile Phe Ile Ala Val		
145	150	155
Asp His Cys Ala Lys Ser Lys Phe Asp Asn Val Ile Val Ala Leu Lys		
165	170	175
Gly Asn Asn Glu Ile Ser His Val Gly Ile Ile Lys Ser Ile Ile Pro		
180	185	190
Asp Thr Thr Lys Asp Thr Val Lys Ala Lys Asp Val Val Phe Ile Ser		
195	200	205
Lys Leu Pro Asp Ser Leu Thr Glu Ser Ser Ser Pro Ser Ser Gln Arg		
210	215	220
Phe Tyr Ile Glu Thr Leu Asp Glu Leu Leu Ile Pro Lys Ile Thr Ser		
225	230	235
Thr Leu Phe Ala Gly Lys Ser Tyr Leu Lys Thr Arg Thr Asp Tyr Leu		
245	250	255
Pro Trp Lys Gln Leu Val Lys Gln Ser Leu Lys His Ser His Leu Pro		
260	265	270
Glu Thr Leu Arg Arg Val Ala Ile Gly Phe Leu Cys Ile Thr Leu Thr		
275	280	285
Tyr Ala Gly Met Ile Leu Gly Ile His Lys Pro Arg Phe Arg Lys Ser		
290	295	300
Ile Ala Leu Tyr Phe Ile Phe Pro Ile Leu Asp Leu Ile Leu Leu Ile		
305	310	315
Val Gly Lys Asn Thr Lys Asn Leu Pro Leu Ala Phe Met Leu Phe Val		
325	330	335
Phe Pro Gln Leu Val Ser Trp Val Val Phe Ala Ala Arg Ala Tyr Arg		
340	345	350
Glu Ser Arg Gly Tyr Ala		
355		
<210>1071		
<211>319		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1071		
Met Val Leu Ser Ser Asp Leu Leu Arg Asp Asp Lys Gln Leu Asp Leu		
1	5	10
Phe Phe Ala Ser Leu Asp Val Lys Lys Arg Tyr Leu Leu Ala Leu Ser		

20	25		
Gly	Gly		
Ser	Asp		
Leu	Phe		
Phe	Tyr		
Leu	Leu		
Lys	Glu		
Glu	Arg		
	Gly		
35	40	45	
Val	Ser	Phe	
Thr	Ala	Val	
His	Ile	Asp	
	His	Gly	
50	55	60	
Ala	Gln	Glu	
Ala	Lys	Glu	
Glu	Leu	Glu	
Leu	Cys	Ala	
Arg	Glu	Gly	
	Val		
65	70	75	80
Pro	Phe	Val	Leu
Tyr	Thr	Leu	Thr
Ala	Glu	Glu	Gln
Gly	Asp	Lys	Asp
		90	95
Leu	Glu	Asn	Gln
Ala	Arg	Lys	Arg
		Arg	Tyr
100	105	110	
Tyr	Arg	Gln	Leu
Leu	Asp	Ala	Gly
Gly	Ile	Phe	Leu
Ala	His	His	His
		Asn	Ala
115	120	125	
Asp	Gln	Ala	Glu
Glu	Thr	Val	Leu
Leu	Lys	Arg	Leu
		Glu	Ser
130	135	140	Ala
His	Leu	Asp	His
145	150	155	Leu
Leu	Leu	Arg	Pro
His	Ile	Pro	Lys
		Ser	Ser
165	170	175	Leu
Leu	Asp	Ala	Arg
Gly	Ile	Ser	Tyr
Leu	Gln	Asp	Pro
		Ser	Asn
180	185	190	Glu
Glu	Arg	Tyr	Leu
Leu	Arg	Ala	Arg
		Met	Arg
195	200	205	Lys
Glu	Glu	Val	Phe
Gly	Lys	Asn	Ile
		Thr	Phe
210	215	220	Pro
Glu	Glu	Ser	Leu
Ala	Glu	Leu	Ser
		Glu	Tyr
225	230	235	Leu
Phe	Phe	Ser	Ala
Ala	Ala	Thr	His
		Gln	Asp
245	250	255	Ser
Pro	Asp	Cys	Leu
Ile	Gln	Gln	Ala
		Phe	Leu
260	265	270	Cys
Lys	Phe	Asn	Asn
Ala	Gly	Ile	Ala
		Val	Ser
275	280	285	Arg
Met	Val	Tyr	Asp
His	Leu	Ser	Arg
		Ser	Ser
290	295	300	Cys
Arg	Asn	Lys	Ile
Ile	Val	Ile	Ile
		Lys	Pro
305	310	315	Gly
			Val
			Val
			Val
			Ile
			Asp

&lt;210&gt;1072

&lt;211&gt;918

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1072

Leu	Ile	Ser	Leu	Val	Val	Lys	Phe	Met	Ser	Lys	Asp	Lys	Met	Lys
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Pro	Glu	Pro	Lys	Lys	Asn	Phe	Pro	Thr	Val	Phe	Phe	Phe	Leu	Leu
						20	25	30						
Gly	Val	Val	Phe	Gly	Val	Val	Ala	Phe	Gln	Asn	Phe	Leu	Ala	Gly
						35	40	45						
Lys	Ala	Arg	Val	Gly	Phe	Ser	His	Gln	Ile	Glu	His	Leu	Val	Asn
						50	55	60						
Arg	Leu	Ile	Val	Pro	Glu	Asp	Ser	His	Lys	Ile	Ala	Leu	Asn	Asn
						65	70	75						80
Leu	Val	Val	Phe	Gly	Gly	Arg	Phe	Arg	Asp	Val	Gln	Thr	Gln	Gly
						85	90	95						
Gln	Leu	Arg	Tyr	His	Tyr	Leu	Glu	Leu	Ile	Asp	Gln	Gly	His	Arg
						100	105	110						
Asp	Leu	Asp	Leu	Gln	Glu	Thr	Ser	Lys	Ser	Leu	Thr	Thr	Leu	Gly
						115	120	125						
Glu	Val	Thr	Asn	Ser	Ile	Leu	Trp	Phe	Ser	Ala	Ile	Ser	Gly	Ser
						130	135	140						
Ile	Pro	Glu	Gln	Gly	Tyr	Ala	Ile	Ser	Tyr	Pro	Ser	Glu	Val	Ser
						145	150	155						160
Ser	Val	Leu	Thr	Glu	Pro	Leu	Val	Val	Thr	Gly	Pro	Ala	Thr	Pro
						165	170	175						

Leu Ile Asn Leu      Ser Leu Gln Glu Arg Tyr Pro Ile Leu Ser Arg  
                   180                        185                        190  
 Ser Pro Glu Ala Leu Arg Thr Tyr Gly Ser Asp Leu Tyr Glu Leu Ile  
                   195                        200                        205  
 Gly Lys Tyr Leu Ser Pro Val Leu Gly Ile Gly Ser Glu Thr Leu Lys  
                   210                        215                        220  
 Arg Glu Leu Lys Asp Leu Tyr Gln Gln Val Glu Val Ser Leu Thr Gln  
                   225                        230                        235                        240  
 Glu Thr Asp Thr Glu Ala Ala Tyr Thr Leu Tyr Gly Gln Val Leu Ser  
                   245                        250                        255  
 Thr Leu Asn Arg Ile Ser Ser Ser Leu Val Val Ser Glu Gly Gly Glu  
                   260                        265                        270  
 Arg Phe Ser Gln Leu Arg Ser Val Arg Leu Tyr Arg Glu Glu Trp Asn  
                   275                        280                        285  
 Lys Tyr His Lys Leu Val Glu Ala Arg Asp Leu Asn Gln Ala Gln Leu  
                   290                        295                        300  
 Glu Lys Leu Arg Gly Glu Leu Ser Gln Thr Val Trp Tyr Phe Asn Asn  
                   305                        310                        315                        320  
 Gln Glu Leu Ser Ser Arg Ser Leu Glu Lys Gln Asp Pro Glu Val Phe  
                   325                        330                        335  
 Gly His Trp Phe Ala Gly Ala Lys Glu Glu Trp Thr Ala Phe Lys Phe  
                   340                        345                        350  
 Asn His Ser Leu Ser Phe Lys Ala Pro Asp Gln Pro Arg Asn Leu Val  
                   355                        360                        365  
 Leu Glu Lys Thr Phe Lys Ser Gln Glu Pro Ser Pro His Xaa Leu Gly  
                   370                        375                        380  
 Tyr Leu Phe Thr Xaa Leu Pro Ile Ile Leu Val Leu Leu Phe Val Tyr  
                   385                        390                        395                        400  
 Leu Val Phe Ser Arg Gln Met Arg Gly Met Ser Gly Ser Ala Met Ser  
                   405                        410                        415  
 Phe Gly Lys Ser Pro Ala Arg Met Leu Leu Lys Gly Gln Asn Lys Val  
                   420                        425                        430  
 Thr Phe Ala Asp Val Ala Gly Ile Glu Glu Ala Lys Glu Glu Leu Ile  
                   435                        440                        445  
 Glu Ile Val Asp Phe Leu Lys Asn Pro Asn Lys Phe Thr Ser Leu Gly  
                   450                        455                        460  
 Gly Arg Ile Pro Lys Gly Val Leu Leu Ile Gly Pro Pro Gly Thr Gly  
                   465                        470                        475                        480  
 Lys Thr Leu Ile Ala Lys Ala Val Ser Gly Glu Ala Asp Arg Pro Phe  
                   485                        490                        495  
 Phe Ser Ile Ala Gly Ser Asp Phe Val Glu Met Phe Val Gly Val Gly  
                   500                        505                        510  
 Ala Ser Arg Ile Arg Asp Met Phe Glu Gln Ala Lys Arg Asn Ala Pro  
                   515                        520                        525  
 Cys Ile Ile Phe Ile Asp Glu Ile Asp Ala Val Gly Arg His Arg Gly  
                   530                        535                        540  
 Ala Gly Ile Gly Gly His Asp Glu Arg Glu Gln Thr Leu Asn Gln  
                   545                        550                        555                        560  
 Leu Leu Val Glu Met Asp Gly Phe Gly Thr Asn Glu Gly Val Ile Leu  
                   565                        570                        575  
 Met Ala Ala Thr Asn Arg Pro Asp Val Leu Asp Lys Ala Leu Leu Arg  
                   580                        585                        590  
 Pro Gly Arg Phe Asp Arg Arg Val Val Met Asn Leu Pro Asp Ile Lys  
                   595                        600                        605  
 Gly Arg Phe Glu Ile Leu Met Val His Ala Lys Arg Ile Lys Leu Asp  
                   610                        615                        620  
 Pro Thr Val Asp Leu Met Ala Val Ala Arg Ser Thr Pro Gly Ala Ser  
                   625                        630                        635                        640  
 Gly Ala Asp Leu Glu Asn Leu Leu Asn Glu Ala Ala Leu Leu Ala Ala  
                   645                        650                        655  
 Arg Lys Asp Arg Thr Ala Val Thr Ala Val Asp Val Ala Glu Ala Arg  
                   660                        665                        670  
 Asp Lys Val Leu Tyr Gly Lys Glu Arg Arg Ser Leu Glu Met Asp Ala  
                   675                        680                        685

Glu Glu Arg Lys Thr Ile Ala Tyr His Glu Ser Gly His A al Val  
 690 695 700  
 Gly Leu Cys Val Gln His Gly Asp Pro Val Asp Lys Val Thr Ile Ile  
 705 710 715 720  
 Pro Arg Gly Leu Ser Leu Gly Ala Thr His Phe Leu Pro Glu Lys Asn  
 725 730 735  
 Lys Leu Ser Tyr Trp Lys Lys Glu Leu Tyr Asp Gln Leu Ala Val Leu  
 740 745 750  
 Met Gly Gly Arg Ala Ala Glu Glu Ile Phe Leu Gly Asp Ile Ser Ser  
 755 760 765  
 Gly Ala Gln Gln Asp Ile Ser Gln Ala Thr Lys Leu Val Arg Ser Met  
 770 775 780  
 Val Cys Glu Trp Gly Met Ser Pro Gln Leu Gly Asn Val Thr Tyr Asp  
 785 790 795 800  
 Glu Arg Ser Asp Gly Leu Thr Gly Tyr Gly Tyr His Glu Lys Ser  
 805 810 815  
 Tyr Ser Glu Glu Thr Ala Lys Thr Ile Asp Thr Glu Leu Arg Met Leu  
 820 825 830  
 Leu Asp Ala Ala Tyr Gln Arg Ala Leu Asp Ile Ile Asn Glu His Lys  
 835 840 845  
 Ala Glu Ile Glu Leu Met Thr Gln Met Leu Ile Glu Phe Glu Thr Leu  
 850 855 860  
 Asp Ser Lys Asp Val Lys Glu Ile Met Asp His Thr Trp Asp Pro Glu  
 865 870 875 880  
 Lys Lys Arg Ala Arg Leu Lys Glu Glu Gly Met Leu Phe Lys Lys Ser  
 885 890 895  
 Ser Asp Asp Leu Pro Pro Pro Pro Lys Glu Asp Thr Leu Pro Gly  
 900 905 910  
 Leu Gly Phe Asn Ala Thr  
 915  
 <210>1073  
 <211>568  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1073

Ser Ser Cys Tyr Leu Arg Xaa Ser Ala Ala Leu Ala Ile Ser Asp Ile  
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 Pro Gln Ser Asn Ile Val Ala Gly Val Arg Ile Gly Cys Ile Asp Asn  
 20 25 30  
 Gln Trp Val Ile Asn Pro Thr Lys Thr Glu Leu Ala Ser Ser Thr Leu  
 35 40 45  
 Asp Leu Val Leu Ala Gly Thr Glu Asn Ala Ile Leu Met Ile Glu Gly  
 50 55 60  
 His Cys Asp Phe Phe Thr Glu Glu Gln Val Leu Asp Ala Ile Glu Phe  
 65 70 75 80  
 Gly His Lys His Ile Val Thr Ile Cys Lys Arg Leu Gln Leu Trp Gln  
 85 90 95  
 Glu Glu Val Gly Lys Ser Lys Asn Leu Ser Ala Val Tyr Pro Leu Pro  
 100 105 110  
 Ala Glu Val Leu Thr Ala Val Lys Glu Cys Ala Gln Asp Lys Phe Thr  
 115 120 125  
 Glu Leu Phe Asn Ile Lys Asp Lys Lys Val His Ala Ala Thr Ala His  
 130 135 140  
 Glu Ile Glu Glu Asn Ile Leu Glu Lys Leu Gln Arg Glu Asp Asp Asp  
 145 150 155 160  
 Leu Phe Ser Ser Phe Asn Ile Lys Ala Ala Cys Lys Thr Leu Lys Ser  
 165 170 175  
 Asp Thr Met Arg Ala Leu Ile Arg Asp Arg Glu Ile Arg Ala Asp Gly  
 180 185 190  
 Arg Ser Leu Thr Thr Val Arg Pro Ile Thr Ile Glu Thr Ser Tyr Leu  
 195 200 205  
 Pro Arg Thr His Gly Ser Cys Leu Phe Thr Arg Gly Glu Thr Gln Thr  
 210 215 220  
 Leu Ala Val Cys Thr Leu Gly Ser Glu Ala Met Ala Gln Arg Tyr Glu

225	230	235	240
Asp	Leu	Asn	Gly
Glu	Gly	Leu	Ser
Lys	Phe	Tyr	Leu
		Gln	Tyr
		Phe	Phe
245		250	255
Pro	Pro	Phe	Ser
Val	Gly	Glu	Val
		Gly	Arg
		Ile	Gly
		Ser	Pro
		Gly	Arg
260		265	270
Arg	Glu	Ile	Gly
His	Gly	Lys	Leu
		Ala	Glu
		Lys	Ala
		Leu	Ser
		His	Ala
275		280	285
Leu	Pro	Asp	Ser
Ala	Thr	Phe	Pro
		Tyr	Thr
		Ile	Arg
		Ile	Glu
		Ser	Asn
290		295	300
Ile	Thr	Glu	Ser
Asn	Gly	Ser	Ser
		Met	Ala
		Ser	Val
		Cys	Gly
305		310	315
			320
Cys	Leu	Ala	Leu
Met	Asp	Ala	Gly
		Val	Pro
		Ile	Ser
		Ser	Pro
		Ile	Ala
325		330	335
Gly	Ile	Ala	Met
Gly	Leu	Ile	Leu
		Asp	Asp
		Gln	Gly
		Ala	Ile
		Ile	Leu
340		345	350
Ser	Asp	Ile	Ser
Gly	Leu	Glu	Asp
		His	Leu
		Gly	Asp
		Met	Asp
		Phe	Lys
355		360	365
Ile	Ala	Gly	Ser
Gly	Lys	Gly	Ile
		Thr	Ala
		Phe	Gln
		Met	Asp
		Ile	Lys
370		375	380
Val	Glu	Gly	Ile
		Thr	Pro
		Ala	Ile
		Met	Lys
		Lys	Ala
		Leu	Ser
385		390	395
			400
Lys	Gln	Gly	Cys
Asn	Asp	Ile	Leu
		Asn	Ile
		Met	Asn
		Glu	Ala
		Leu	Ser
405		410	415
Ala	Pro	Lys	Ala
Asp	Leu	Ser	Gln
		Tyr	Tyr
		Ala	Pro
		Arg	Ile
		Glu	Thr
420		425	430
Gln	Ile	Lys	Pro
		Thr	Lys
		Ile	Ala
		Ser	Val
		Ile	Gly
435		440	445
Gln	Ile	Arg	Gln
Ile	Ile	Glu	Glu
		Thr	Gly
		Val	Gln
		Ile	Asp
450		455	460
Asp	Leu	Gly	Val
		Val	Ser
		Ile	Ser
		Asn	Ala
		Ser	Ser
		Ala	Ser
465		470	475
			480
Lys	Ala	Lys	Glu
Ile	Ile	Glu	Gly
		Leu	Val
		Gly	Glu
		Val	Val
485		490	495
Lys	Thr	Tyr	Arg
Gly	Arg	Val	Thr
		Ser	Val
		Val	Ala
		Phe	Gly
500		505	510
Val	Glu	Val	Leu
Pro	Gly	Lys	Glu
		Gly	Leu
		Cys	Cys
515		520	525
Ser	Arg	Gln	Arg
Ile	Glu	Asn	Ile
		Ser	Asp
		Val	Val
		Lys	Lys
530		535	540
Ile	Ile	Asp	Val
Lys	Leu	Leu	Ser
		Ile	Asn
		Glu	Lys
		Gly	Gln
545		550	555
			560
Leu	Ser	His	Lys
		Ala	Thr
		Leu	Glu
565			

&lt;210&gt;1074

&lt;211&gt;127

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1074

Ser	Asp	Arg	Ser	Lys	Ile	Leu	Val	Phe	Glu	Thr	Gly	Lys	Ile	Ala	Arg	
1				5			10			15						
Gln	Ala	Asn	Gly	Ala	Val	Leu	Val	Arg	Ser	Gly	Glu	Thr	Cys	Val	Phe	
					20		25			30						
Ala	Ser	Ala	Cys	Ala	Val	Asp	Leu	Asp	Asp	Lys	Val	Asp	Phe	Leu	Pro	
						35		40		45						
Leu	Arg	Val	Asp	Tyr	Gln	Glu	Lys	Phe	Ser	Ser	Thr	Gly	Lys	Thr	Leu	
					50		55			60						
Gly	Gly	Phe	Ile	Lys	Arg	Glu	Gly	Arg	Pro	Ser	Glu	Lys	Glu	Ile	Leu	
					65		70			75			80			
Val	Ser	Arg	Leu	Ile	Asp	Arg	Ser	Leu	Arg	Pro	Ser	Phe	Pro	Tyr	Arg	
						85		90		95						
Leu	Met	Gln	Asp	Val	Gln	Val	Leu	Ser	Tyr	Val	Trp	Ser	Tyr	Asp	Gly	
					100		105			110						
Gln	Val	Leu	Pro	Asp	Pro	Leu	Ala	Ile	Cys	Ala	Xaa	Leu	Leu	Leu		
					115		120			125						

&lt;210&gt;1075

&lt;211&gt;163

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1075

Leu Gly Gly Glu Lys Leu Ile Asn Met Glu Lys Asp Ile Phe Phe Met  
 1 5 10 15  
 Gln Gln Ala Phe Lys Glu Ala Arg Lys Ala Tyr Asp Gln Asp Glu Val  
 20 25 30  
 Pro Val Gly Cys Val Ile Val Lys Asp Asp Lys Ile Ile Ala Arg Ala  
 35 40 45  
 His Asn Ser Val Glu Lys Leu Lys Asp Ala Thr Ala His Ala Glu Ile  
 50 55 60  
 Leu Cys Ile Gly Ser Ala Ala Gln Asp Leu Asp Asn Trp Arg Leu Leu  
 65 70 75 80  
 Asp Thr Val Leu Tyr Cys Thr Leu Glu Pro Cys Leu Met Cys Ala Gly  
 85 90 95  
 Ala Ile Gln Leu Ala Arg Ile Pro Arg Ile Val Trp Ala Ala Pro Asp  
 100 105 110  
 Val Arg Leu Gly Ala Gly Gly Ser Trp Val Asn Ile Phe Thr Glu Glu  
 115 120 125  
 His Pro Phe His Thr Val Ser Cys Thr Gly Gly Val Cys Ser Glu Glu  
 130 135 140  
 Ala Glu His Leu Met Lys Lys Phe Phe Val Glu Lys Arg Arg Glu Lys  
 145 150 155 160  
 Ser Glu Lys

&lt;210&gt;1076

&lt;211&gt;100

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1076

Lys Ser Ala Glu Arg Lys Val Lys Asn Lys Ile Val Thr Leu Leu Asp  
 1 5 10 15  
 Gln Leu Tyr Glu Asp Gln Glu Ser Arg Leu Gln Lys Leu Gly Glu Glu  
 20 25 30  
 Ile Val Pro Asn Leu Thr Pro Glu Asp Leu Leu Gln Pro Met Asp Phe  
 35 40 45  
 Xaa Gln Leu Glu Gly Asn Pro Ala Phe Arg Phe Glu Glu Gly Val Leu  
 50 55 60  
 Ser Gly Ile Gly Glu Val Arg Ala Ala Ile Phe Asn Gly Ala Leu Ser  
 65 70 75 80  
 Arg Glu Leu Glu Ser Gln Arg Ser Ser Ile Gly Val Gly Asp Leu Phe  
 85 90 95  
 Phe Phe Thr Lys  
 100

&lt;210&gt;1077

&lt;211&gt;180

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1077

His Leu Ser Ile Glu Glu Leu Met Ser Ile Gln Pro Val Ser Asn Thr  
 1 5 10 15  
 Thr Thr Lys Ala Asp Lys Val Ile Pro Asp Ser Thr Lys Val Ile Ser  
 20 25 30  
 Asp Ser Ile Thr Ile Asn Lys Gln Ser Ala Phe Tyr Phe Cys Ile Ser  
 35 40 45  
 Val Met Leu Arg Leu Ser Glu Ser Thr Thr Glu Tyr Gly Lys Ser Ile  
 50 55 60  
 Leu Ala Val Leu Glu Asp Asn Thr Ile Val Gln Gln Gln Arg Val Lys  
 65 70 75 80  
 Glu Leu Ile Asn Leu Pro Leu Leu Lys Val Pro Asp Leu Gln Lys Lys  
 85 90 95  
 Asp Gly Ser Asp Asp Glu Tyr Lys Asn Gln Asn Glu Ile Gln Ala Tyr

100	105	110
Gln Ser Ser Asn Gln Gln Ile Ser Ala Asn Arg Gln Met Ile Gln Gln		
115	120	125
Glu Leu Ser Ser Ala Gln Gln Arg Ala Gln Ala Asn Gln Lys Ser Val		
130	135	140
Asn Ser Thr Thr Ile Glu Ser Met Gln Ile Leu Gln Ala Thr Ser Ser		
145	150	155
Met Leu Ser Thr Leu Lys Glu Leu Thr Ile Lys Ala Asn Leu Thr Asn		
165	170	175

Ser Pro Ser Asp  
180

&lt;210&gt;1078

&lt;211&gt;181

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1078

Asn Arg Lys Pro Val Arg Leu Asn Met Trp Ile Ile Asp Pro Leu Ser		
1	5	10
Ala Lys Xaa Pro Leu Gln Ala Ala Ile Asn Val Pro Gly Thr Pro Ile		
20	25	30
Thr Gly Gly Pro Asn Thr Ala Thr Ala Asp Asp Ile Ile Ala Lys Phe		
35	40	45
Ser Lys Asp Ser Asn Pro Leu Ile Val Thr Val Tyr Tyr Val Tyr Gln		
50	55	60
Ser Val Leu Val Ala Gln Asp Asn Leu Ser Ile Ile Ala Gln Glu Leu		
65	70	75
Gln Ala Asn Ser Ser Ala Gln Thr Tyr Leu Asn Asn Gln Glu Ala Leu		
85	90	95
Tyr Gln Tyr Val Ser Ile Pro Lys Asn Lys Leu Asn Asp Asn Ser Ser		
100	105	110
Ser Tyr Leu Gln Asn Ile Gln Ser Asp Asn Gln Ala Ile Gly Ala Ser		
115	120	125
Arg Gln Ala Ile Gln Asn Gln Ile Ser Ser Leu Gly Asn Ala Ala Gln		
130	135	140
Val Ile Ser Ser Asn Leu Asn Thr Asn Asn Ile Ile Gln Gln Ser		
145	150	155
Leu Gln Val Gly Gln Ala Leu Ile Gln Thr Phe Ser Gln Ile Val Ser		
165	170	175
Leu Ile Ala Asn Ile		
180		

&lt;210&gt;1079

&lt;211&gt;168

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1079

Thr Lys Val Asn Phe Phe Ile Met Ser Ile Thr Thr Leu Gly Thr Leu		
1	5	10
Pro Thr Val Asn Thr Ile Asn Ser Ser Arg Pro Pro Leu Glu Pro Leu		
20	25	30
Asn Thr Pro Lys Ile Gly Ala Val Leu Phe Ser Ile Tyr Glu Leu Leu		
35	40	45
Leu Gln Ala Ile Glu Ile Arg Gln Gln Thr Val Leu Thr Gln Ser Gln		
50	55	60
Gln Leu Asn Asp Asn Thr Asn Ile Gln Gln Leu Asn Gln Glu Thr		
65	70	75
Asn Gln Ile Lys Tyr Ala Ile Val Ser Ala Gly Ala Lys Glu Asp Glu		
85	90	95
Ile Thr Arg Val Gln Asn Gln Asn Gln Asn Tyr Ser Ala Gln Arg Ser		
100	105	110
Asn Ile Gln Asp Glu Leu Val Thr Thr Arg Gln Asn Gly Gln Ile Ile		
115	120	125
Leu Ser His Ala Ser Thr Asn Ile Asn Ile Gln Gln Gln Ser Ser		
130	135	140
Gln Asp Ser Ser Phe Ile Lys Thr Thr Asn Ser Ile Gly Ser Thr Val		

145	150	155	160
Asn Gln Leu Asn Lys Pro Leu Gly			
165			
<210>1080			
<211>440			
<212>PRT			
<213>Chlamydia pneumoniae			
<400>1080			
Val Leu Asn Tyr Ser Phe Ile Gly Met Leu Lys Pro Met Tyr Val Leu			
1 5 10 15			
Ser Lys Arg Leu Tyr Arg Trp Val Asn Gln Leu Ile Lys Leu Gly Asp			
20 25 30			
Leu Val Lys Asn Ser Arg Ser Phe Ser Val Glu Trp Val Phe Ile Ser			
35 40 45			
Ala Leu Leu Leu Ile Phe Gly Cys Leu Gly Cys Ala Ser Val Val Lys			
50 55 60			
Val Ser Leu Val Pro Phe Leu Leu Phe Ser Phe Leu Ala Phe Pro			
65 70 75 80			
Leu Ile Leu Cys Phe Arg Gly Lys Gly Tyr Ala Leu Leu Leu Gly Val			
85 90 95			
Phe Val Thr Leu Tyr Val Ala Lys Tyr Val Val Gly Glu Thr Leu Tyr			
100 105 110			
Val Ser Phe Trp Leu Ser Gly Leu Gly Val Ser Phe Leu Leu Ala Phe			
115 120 125			
Gly Leu Phe Leu Gln Gly Val Trp Leu Ala Gln Glu Glu Glu Met Val			
130 135 140			
Lys Gly Lys Glu Gln Leu Arg Leu Ser Glu Asp Leu Asp Ala Gln Arg			
145 150 155 160			
Ser Ala Tyr Glu Asp Leu Leu Leu Thr Lys Ser Gln Glu Lys Glu Phe			
165 170 175			
Leu Asp Ala Arg Ala Gln Gly Leu Asp Arg Glu Leu Thr Glu Cys Gln			
180 185 190			
Glu Leu Leu Lys Ala Ala Tyr Gln Lys Gln Glu Tyr Leu Thr Ile Asp			
195 200 205			
Leu Lys Ile Leu Ala Asp Gln Lys Asn Ser Trp Leu Glu Asp Tyr Ala			
210 215 220			
Glu Leu His Asn Lys Tyr Ile Glu Leu Val Ser Lys Asn Gly Asp Val			
225 230 235 240			
Val Phe Pro Trp Val Ala Glu Pro Ser Val Gly Glu Ser Gln Gly Ser			
245 250 255			
Glu Arg Val Asp Val Ser Arg Trp Val Ser Ala Leu Gln Glu Lys Glu			
260 265 270			
Glu Ser Leu Glu Arg Leu Arg Asn Glu Ile Leu Val Glu Lys Gln Arg			
275 280 285			
Cys Ser Asp Tyr Glu His Arg Cys Gln Glu Leu Gly Leu Leu Leu Gln			
290 295 300			
Asn Phe Thr Ala Leu Glu Arg Arg Cys Glu Glu Leu Gln Asn Leu Leu			
305 310 315 320			
Asn Gln Lys Glu Thr Gln Ile Asn Glu Leu His Gln Leu Val Cys Lys			
325 330 335			
Ser Glu Glu Lys Val Ser Val Glu Pro Ser Ala His Ala Glu Thr Ser			
340 345 350			
Cys Val Glu Glu Lys Gln Tyr Lys Gly Leu Tyr Ser Gln Leu Gln Glu			
355 360 365			
Gln Phe Leu Glu Lys Ser Glu Thr Leu Ser Leu Val Arg Lys Lys Leu			
370 375 380			
Phe Ala Val Gln Glu Lys Tyr Leu Thr Leu Lys Lys Glu Glu Leu			
385 390 395 400			
Thr Lys Gln Asp Ile Ser Phe Asp Asp Ile Ser Met Ile Gln Gly Leu			
405 410 415			
Leu Glu Arg Ile Glu Ile Leu Glu Glu Val Ser His Leu Glu Glu			
420 425 430			
Leu Val Ser Arg Ser Leu Ser Leu			
435 440			

<210>1081  
 <211>294  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1081  
 Val Ile Leu Met Lys Arg Asn Asp Pro Cys Trp Cys Gly Ser Gly Arg  
     1              5              10              15  
 Lys Trp Lys Gln Cys His Tyr Pro Gln Pro Pro Lys Met Ser Pro Glu  
     20              25              30  
 Ala Leu Lys Gln His Tyr Ala Ser Gln Tyr Asn Ile Leu Leu Lys Thr  
     35              40              45  
 Pro Glu Gln Lys Ala Lys Ile Tyr Asn Ala Cys Gln Ile Thr Ala Arg  
     50              55              60  
 Ile Leu Asp Glu Leu Cys Lys Ala Ser Gln Lys Gly Val Thr Thr Asn  
     65              70              75              80  
 Glu Leu Asp Glu Leu Ser Gln Glu Leu His Lys Lys Tyr Asp Ala Ile  
     85              90              95  
 Ala Ala Pro Phe His Tyr Gly Ser Pro Pro Phe Pro Lys Thr Ile Cys  
     100            105            110  
 Thr Ser Leu Asn Glu Val Ile Cys His Gly Ile Pro Asn Asp Ile Pro  
     115            120            125  
 Leu Lys Asp Gly Asp Ile Met Asn Ile Asp Val Ser Cys Ile Val Asp  
     130            135            140  
 Gly Tyr Tyr Gly Asp Cys Ser Arg Met Val Met Ile Gly Glu Val Pro  
     145            150            155            160  
 Glu Ile Lys Lys Ile Cys Gln Ala Ala Leu Glu Cys Leu Asn Asp  
     165            170            175  
 Ser Ile Ala Ile Leu Lys Pro Gly Ile Pro Leu Cys Glu Ile Gly Glu  
     180            185            190  
 Ala Ile Glu Ala Arg Ala Asp Thr Tyr Gly Phe Ser Val Val Asp Gln  
     195            200            205  
 Phe Val Gly His Gly Val Gly Ile Glu Phe His Glu Asn Pro Tyr Val  
     210            215            220  
 Pro His Tyr Arg Asn Arg Ser Met Ile Pro Leu Ala Pro Gly Met Ile  
     225            230            235            240  
 Phe Thr Ile Glu Pro Met Ile Asn Val Gly Lys Lys Glu Gly Val Val  
     245            250            255  
 Asp Pro Lys Asn Gln Trp Glu Ala Arg Thr Cys Asp Asn Gln Pro Ser  
     260            265            270  
 Ala Gln Trp Glu His Thr Ile Ala Ile Thr Glu Thr Gly Tyr Glu Ile  
     275            280            285  
 Leu Thr Leu Leu Asn Asp  
     290

<210>1082  
 <211>202  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1082  
 Met Leu Ile Leu Leu Asn Leu Ser Leu Leu Phe Tyr Val Leu Phe Asp  
     1              5              10              15  
 Ser Pro Gly Ser Ile Pro Val Phe Val Ala Leu Leu Lys Asn Phe Ser  
     20              25              30  
 Arg Lys Lys Gln Gln Arg Val Ile Leu Arg Glu Cys Leu Phe Ala Leu  
     35              40              45  
 Gly Ala Leu Ile Leu Phe Val Thr Phe Gly Arg Ser Phe Phe Gln Phe  
     50              55              60  
 Leu Asp Ile Ser Leu Tyr Ala Phe Gln Ile Ile Gly Gly Phe Leu Leu  
     65              70              75              80  
 Phe Thr Val Ser Ile Lys Met Met Leu Ala Pro Met Pro Glu Lys Ala  
     85              90              95  
 Lys Asp Asp Thr Ser Lys Thr Glu Pro Ile Phe Phe Pro Leu Ala Phe  
     100            105            110  
 Pro Val Ile Thr Gly Pro Ala Val Ile Thr Ala Leu Leu Ser Tyr Met  
     115            120            125

Glu Glu Gly Ile Tyr Ser Arg Glu Ile Ile Phe Thr Ala Met Ile Ile  
 130 135 140  
 Ala Trp Ala Phe Ser Leu Phe Thr Leu Leu Cys Ser Ser Phe Phe Asp  
 145 150 155 160  
 Arg Leu Ser Gly Asn Phe Gly Leu Leu Ala Leu Glu Arg Leu Phe Gly  
 165 170 175  
 Ile Ala Leu Leu Met Ser Val Asn Leu Met Leu Lys Gly Ile Ser  
 180 185 190  
 Ile Ala Phe Asn Ile Gly Phe Tyr Ile Gly  
 195 200  
 <210>1083  
 <211>251  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1083

Thr Ser Arg Tyr Gly Pro Leu Pro Cys Ser Arg His His Glu Asp Leu  
 1 5 10 15  
 His Lys Arg His Ala Asn Thr Asn Arg Arg Glu Ile Asp Arg Gln Phe  
 20 25 30  
 Pro Ala Arg Phe Leu Tyr Arg Ser Gln Asp Pro Ile Tyr Lys Phe Glu  
 35 40 45  
 Asp Leu Asn Gly Lys Val Leu Gly Phe Cys Leu Asn Asn Ser Arg Asp  
 50 55 60  
 Leu Asn Arg Leu Leu Glu Thr Leu Asn Arg Asn Gly Val Val Pro Ser  
 65 70 75 80  
 Glu Val Lys Asn Val Ser Ser Asp Leu Ile Ser Pro Met Leu Leu Asn  
 85 90 95  
 Lys Ile Asp Phe Leu Tyr Gly Ala Phe Tyr Asn Ile Glu Gly Val Lys  
 100 105 110  
 Leu Gln Thr Leu Gly Met Pro Val Lys Cys Phe Leu Ser Asp Thr Cys  
 115 120 125  
 Asp Leu Pro Thr Gly Pro Gln Leu Ile Val Phe Thr Lys Lys Gly Thr  
 130 135 140  
 Lys Ala Ser Glu Pro Glu Ile Val Glu Ala Phe Gln Lys Ala Leu Gln  
 145 150 155 160  
 Glu Ser Ile Ile Phe Ser Lys Asp His Pro Glu Asp Ala Phe Lys Leu  
 165 170 175  
 Tyr Ala Lys Glu Thr Lys Ser Ile Pro Lys Asn Leu Tyr Gln Glu Tyr  
 180 185 190  
 Leu Gln Trp Glu Glu Thr Phe Pro Leu Leu Ala Gln Ser Gln Asp Pro  
 195 200 205  
 Leu Ser Lys Asp Leu Val Asp Lys Leu Leu Glu Thr Ile Ile Lys Arg  
 210 215 220  
 Tyr Pro Glu Leu Ala Ser Glu Val Ala Lys Phe Ser Leu Asn Asp Leu  
 225 230 235 240  
 Tyr Asn Pro Ser Leu Pro Glu Glu Gln Ser Val  
 245 250

<210>1084  
 <211>303  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1084

Arg Ser Pro Thr Thr Ser Phe His Pro Ala Thr Val His Ser Tyr Val  
 1 5 10 15  
 Cys Ser Gly Ser Thr Asp Cys Thr Leu Val Trp Leu Gly Asn Arg Cys  
 20 25 30  
 Cys Asn Arg Pro Tyr Ser Thr His His Ile Leu Ser Ala His Pro Asp  
 35 40 45  
 Tyr Leu Ser Gly His Leu Ile Asn Thr Arg Arg Thr Tyr Arg Ala Ile  
 50 55 60  
 Arg Pro Leu Arg Ser Thr Lys Phe Gln Leu Leu Ile Lys Leu Arg Ile  
 65 70 75 80  
 Pro His Ala Leu Pro His Ile Phe Ser Gly Leu Lys Ile Ala Ile Gly  
 85 90 95

Ser Ala Gly Phe      Ala Ile Ala Gly Glu Trp Val Asn Ser Gln Ser  
                   100                        105                        110  
 Gly Leu Gly Ile Leu Met Leu Glu Ser Arg Arg Asn Tyr Glu Met Glu  
                   115                        120                        125  
 Leu Ala Phe Ala Gly Leu Ala Thr Leu Ser Ile Leu Thr Leu Ser Leu  
                   130                        135                        140  
 Phe Gln Ile Thr Leu Leu Ile Glu Lys Leu Ile Phe Ser Leu Phe Arg  
                   145                        150                        155                        160  
 Val Lys Arg Met Ser Leu Lys His Lys Ser Val Ala Lys Lys Ala Leu  
                   165                        170                        175  
 Ser Val Leu Ala Leu Ile Pro Ile Met Leu Ile Pro Trp Lys Gly Asn  
                   180                        185                        190  
 Ser Lys Ser Pro Pro Asp Lys Lys Asn Leu Thr Ser Leu Thr Leu Leu  
                   195                        200                        205  
 Leu Asp Trp Thr Pro Asn Pro Asn His Ile Pro Leu Tyr Ala Gly Val  
                   210                        215                        220  
 Ala Lys Gly Tyr Phe Lys Gin His Gly Leu Asp Leu Gln Leu Gln Lys  
                   225                        230                        235                        240  
 Asn Thr Asp Ser Ser Ser Ala Val Pro His Val Leu Phe Glu Gln Val  
                   245                        250                        255  
 Asp Met Ala Leu Tyr His Ala Leu Gly Ile Met Lys Thr Ser Ile Lys  
                   260                        265                        270  
 Gly Met Pro Ile Gln Ile Val Gly Arg Leu Ile Asp Ser Ser Leu Gln  
                   275                        280                        285  
 Asp Phe Ser Thr Glu Val Arg Thr Pro Ser Thr Asn Leu Lys Thr  
                   290                        295                        300

&lt;210&gt;1085

&lt;211&gt;460

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1085

Met Arg Gln Glu Lys Asp Ser Leu Gly Ile Val Glu Val Pro Glu Asp  
                   1                        5                        10                        15  
 Lys Leu Tyr Gly Ala Gln Thr Met Arg Ser Arg Asn Phe Phe Ser Trp  
                   20                        25                        30  
 Gly Pro Glu Leu Met Pro Tyr Glu Val Ile Arg Ala Leu Val Trp Ile  
                   35                        40                        45  
 Lys Lys Cys Ala Ala Gln Ala Asn Gln Asp Leu Gly Phe Leu Asp Ser  
                   50                        55                        60  
 Lys His Cys Asp Met Ile Val Ala Ala Ala Asp Glu Ile Leu Glu Gly  
                   65                        70                        75                        80  
 Gly Phe Glu Glu His Phe Pro Leu Lys Val Trp Gln Thr Gly Ser Gly  
                   85                        90                        95  
 Thr Gln Ser Asn Met Asn Val Asn Glu Val Ile Ala Asn Leu Ala Ile  
                   100                        105                        110  
 Arg His His Gly Gly Val Leu Gly Ser Lys Asp Pro Ile His Pro Asn  
                   115                        120                        125  
 Asp His Val Asn Lys Ser Gln Ser Ser Asn Asp Val Phe Pro Thr Ala  
                   130                        135                        140  
 Met His Ile Ala Ala Val Ile Ser Leu Lys Asn Lys Leu Ile Pro Ala  
                   145                        150                        155                        160  
 Leu Asp His Met Ile Arg Val Leu Asp Ala Lys Val Glu Glu Phe Arg  
                   165                        170                        175  
 His Asp Val Lys Ile Gly Arg Thr His Leu Met Asp Ala Val Pro Met  
                   180                        185                        190  
 Thr Leu Gly Gln Glu Phe Ser Gly Tyr Ser Ser Gln Leu Arg His Cys  
                   195                        200                        205  
 Leu Glu Ser Ile Ala Phe Ser Leu Ala His Leu Tyr Glu Leu Ala Ile  
                   210                        215                        220  
 Gly Ala Thr Ala Val Gly Thr Gly Leu Asn Val Pro Glu Gly Phe Val  
                   225                        230                        235                        240  
 Glu Lys Ile Ile His Tyr Leu Arg Lys Xaa Thr Asp Glu Pro Phe Ile  
                   245                        250                        255  
 Pro Ala Xaa Asn Tyr Phe Ser Ala Leu Ser Cys His Asp Ala Leu Val

<211>20  
<212>DNA  
<400>1396  
gaccttgcga gcttgggtcg 20  
<210>1397  
<211>20  
<212>DNA  
<400>1397  
gctgctaaat cccatcgctt 20  
<210>1398  
<211>20  
<212>DNA  
<400>1398  
gttttgtggc tttggcagtg 20  
<210>1399  
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<212>DNA  
<400>1399  
actttcctaa gaagcgtagc 20  
<210>1400  
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<212>DNA  
<400>1400  
gaggaatggc gcaggagttt 20  
<210>1401  
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<212>DNA  
<400>1401  
gcagtgaaaa cgaaatccag 20  
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ggccggggat caatcagcta 20  
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<212>DNA  
<400>1404  
gaataagatg caggcggaaag 20  
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gggagacgtt tgtgcgtaaa 20  
<210>1406  
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<212>DNA  
<400>1406  
cgtcctgcag gtgttattgt 20  
<210>1407  
<211>20  
<212>DNA  
<400>1407  
caaggggtgt agagaaagga 20  
<210>1408  
<211>20  
<212>DNA  
<400>1408  
gaagacaaac cttgtcctgg 20

Thr Val Met Thr Ile Thr Ala Ala Val Gin Val Met Met Leu  
 275 280 285  
 Ala Ala Phe Leu Phe Met Lys Gln Met Ser Asp Leu Ser Asp Val Ile  
 290 295 300  
 Ser Thr Ala Lys Tyr Phe Asp Lys Asp Ser Asp Phe Leu Ser Lys Ala  
 305 310 315 320  
 Glu Val Pro Gln Asn Thr Glu Ile Tyr Glu Ile Asn Gly Pro Phe Phe  
 325 330 335  
 Phe Gly Ile Ala Asp Arg Leu Lys Asn Leu Leu Asn Asp Ile Glu Lys  
 340 345 350  
 Pro Pro Lys Ile Phe Ile Leu Cys Met Thr Arg Val Pro Thr Ile Asp  
 355 360 365  
 Ala Ser Ala Met His Ala Leu Glu Glu Phe Phe Leu Glu Cys Asp Arg  
 370 375 380  
 Gln Gly Thr Leu Leu Leu Ala Gly Val Lys Lys Thr Pro Leu Ala  
 385 390 395 400  
 Asp Leu Lys Arg Tyr His Leu Asp Glu Leu Ile Gly Val Asp His Ile  
 405 410 415  
 Phe Ser Asn Ile Lys Ser Ala Leu Leu Phe Ala Gln Ala Leu Thr Asn  
 420 425 430  
 Leu Glu Ser Lys Thr Ser Thr Arg His Leu Val  
 435 440

&lt;210&gt;1087

&lt;211&gt;143

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1087

Lys Asn Phe Ile Pro Lys Leu Tyr Thr Ser Ile Lys Glu Gly Tyr Ser  
 1 5 10 15  
 Phe Asn Thr Phe Lys Lys Asp Phe Gln Ala Gly Ile Thr Val Gly Ile  
 20 25 30  
 Leu Ala Phe Pro Phe Ala Ile Ala Ile Ala Ile Gly Val Gly Val Ser  
 35 40 45  
 Pro Ile Gln Gly Leu Leu Ala Ser Ile Ile Gly Gly Leu Leu Ala Ser  
 50 55 60  
 Ala Met Gly Gly Ser Asn Val Leu Ile Ser Gly Pro Ser Ser Ala Phe  
 65 70 75 80  
 Ile Ser Ile Leu Tyr Cys Leu Ser Ala Lys Tyr Gly Ala Glu Ala Leu  
 85 90 95  
 Phe Thr Val Thr Leu Leu Ala Gly Val Phe Leu Ile Ala Phe Gly Leu  
 100 105 110  
 Thr Gly Leu Gly Thr Phe Ile Lys Tyr Met Pro Tyr Pro Val Val Thr  
 115 120 125  
 Gly Leu Thr His Arg Thr Cys Asp His Tyr Ile Leu Leu Ala Asn  
 130 135 140

&lt;210&gt;1088

&lt;211&gt;422

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1088

Val Thr Met Leu Lys Leu Gln Leu Cys Ala Leu Phe Leu Phe Gly Tyr  
 1 5 10 15  
 Leu Ala Ile Val Phe Glu His Ile Val Arg Val Asn Lys Ser Ala Ile  
 20 25 30  
 Ala Leu Ala Met Gly Gly Leu Met Trp Leu Val Cys Phe Ser His Ile  
 35 40 45  
 Pro Met Ala Asp His Met Ile Leu Val Glu Glu Ile Ala Asp Met Ser  
 50 55 60  
 Gln Val Ile Phe Phe Leu Phe Ser Ala Met Ala Ile Val Glu Leu Ile  
 65 70 75 80  
 Asp Ala His Lys Gly Phe Ser Val Ile Val Lys Phe Cys Arg Ile Gln  
 85 90 95  
 Ser Arg Thr Leu Leu Leu Trp Ala Leu Ile Gly Leu Ser Phe Phe Leu  
 100 105 110

Ser Ala Ala Leu Asp Asn Leu Thr Ser Ile Ile Ile Ile Ile Ser Ile  
     115                     120                     125  
 Leu Lys Arg Leu Val Lys Ala Arg Glu Asp Arg Leu Leu Leu Gly Ala  
     130                     135                     140  
 Ile Cys Val Ile Ala Val Asn Ala Gly Gly Ala Trp Thr Pro Leu Gly  
     145                     150                     155                     160  
 Asp Val Thr Thr Met Leu Trp Ile Asn Asn Lys Ile Thr Ser Trp  
     165                     170                     175  
 Gly Ile Ile Arg Ala Leu Phe Val Pro Ser Leu Val Cys Val Leu Val  
     180                     185                     190  
 Ala Gly Phe Cys Gly Gln Phe Phe Leu Arg Lys Arg Gly Ser Thr Leu  
     195                     200                     205  
 Ile Ala Lys Asp Val Glu Leu Gln Ser Ala Pro Pro Lys Ser Leu Trp  
     210                     215                     220  
 Ile Ile Phe Ile Gly Leu Gly Ser Leu Leu Met Val Pro Val Trp Lys  
     225                     230                     235                     240  
 Ala Cys Leu Gly Leu Pro Pro Phe Met Gly Ala Leu Leu Gly Leu Gly  
     245                     250                     255  
 Leu Val Trp Leu Thr Ser Asp Trp Ile His Ser Pro His Gly Glu Asp  
     260                     265                     270  
 Arg Tyr His Leu Arg Val Pro His Ile Leu Thr Lys Ile Asp Ile Ser  
     275                     280                     285  
 Ser Ile Thr Phe Phe Ile Gly Ile Leu Leu Ala Val Asn Ala Leu Ser  
     290                     295                     300  
 Phe Ala Asn Leu Leu Thr Asp Phe Ser Leu Trp Met Asp Lys Ile Phe  
     305                     310                     315                     320  
 Ser Arg Asn Val Val Ala Ile Val Ile Gly Leu Leu Ser Ser Val Leu  
     325                     330                     335  
 Asp Asn Val Pro Leu Val Ala Xaa Thr Met Gly Met Tyr Thr Leu Pro  
     340                     345                     350  
 Leu Asp Asp Thr Leu Trp Lys Leu Ile Ala Tyr Ala Ala Xaa Thr Gly  
     355                     360                     365  
 Gly Ser Ile Leu Ile Ile Gly Ser Ala Ala Gly Val Ala Phe Met Gly  
     370                     375                     380  
 Leu Glu Lys Val Asp Phe Leu Trp Tyr Phe Lys Arg Ile Ser Trp Ile  
     385                     390                     395                     400  
 Ala Leu Ala Ser Tyr Phe Gly Gly Leu Phe Ser Tyr Phe Val Leu Glu  
     405                     410                     415  
 Ser Leu Asn Phe Phe Ile  
     420

&lt;210&gt;1089

&lt;211&gt;624

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1089

Lys Arg Glu Val Phe Met Lys Lys Gly Lys Leu Gly Ala Ile Val Phe  
     1                     5                     10                     15  
 Gly Leu Leu Phe Thr Ser Ser Val Ala Gly Phe Ser Lys Asp Leu Thr  
     20                     25                     30  
 Lys Asp Asn Ala Tyr Gln Asp Leu Asn Val Ile Glu His Leu Ile Ser  
     35                     40                     45  
 Leu Lys Tyr Ala Pro Leu Pro Trp Lys Glu Leu Leu Phe Gly Trp Asp  
     50                     55                     60  
 Leu Ser Gln Gln Thr Gln Gln Ala Arg Leu Gln Leu Val Leu Glu Glu  
     65                     70                     75                     80  
 Lys Pro Thr Thr Asn Tyr Cys Gln Lys Val Leu Ser Asn Tyr Val Arg  
     85                     90                     95  
 Ser Leu Asn Asp Tyr His Ala Gly Ile Thr Phe Tyr Arg Thr Glu Ser  
     100                     105                     110  
 Ala Tyr Ile Pro Tyr Val Leu Lys Leu Ser Glu Asp Gly His Val Phe  
     115                     120                     125  
 Val Val Asp Val Gln Thr Ser Gln Gly Asp Ile Tyr Leu Gly Asp Glu  
     130                     135                     140  
 Ile Leu Glu Val Asp Gly Met Gly Ile Arg Glu Ala Ile Glu Ser Leu

145	150	155	160
Arg Phe Gly Arg	Gly Ser Ala Thr Asp Tyr	Ser Ala Ala Val Arg	Ser
165	170	175	
Leu Thr Ser Arg Ser Ala Ala Phe	Gly Asp Ala Val Pro	Ser Gly Ile	
180	185	190	
Ala Met Leu Lys Leu Arg Arg	Pro Ser Gly Leu Ile Arg	Ser Thr Pro	
195	200	205	
Val Arg Trp Arg Tyr Thr Pro	Glu His Ile Gly Asp Phe	Ser Leu Val	
210	215	220	
Ala Pro Leu Ile Pro Glu His Lys	Pro Gln Leu Pro Thr Gln	Ser Cys	
225	230	235	240
Val Leu Phe Arg Ser Gly Val Asn Ser	Gln Ser Ser Ser Ser	Leu	
245	250	255	
Phe Ser Ser Tyr Met Val Pro Tyr	Phe Trp Glu Leu Arg Val	Gln	
260	265	270	
Asn Lys Gln Arg Phe Asp Ser Asn His	His Ile Gly Ser Arg Asn	Gly	
275	280	285	
Phe Leu Pro Thr Phe Gly Pro	Ile Leu Trp Glu Gln Asp	Lys Gly Pro	
290	295	300	
Tyr Arg Ser Tyr Ile Phe Lys Ala Lys	Asp Ser Gln Gly Asn	Pro His	
305	310	315	320
Arg Ile Gly Phe Leu Arg Ile Ser Ser	Tyr Val Trp Thr Asp	Leu Glu	
325	330	335	
Gly Leu Glu Glu Asp His Lys Asp	Ser Pro Trp Glu Leu Phe	Gly Glu	
340	345	350	
Ile Ile Asp His Leu Glu Lys Glu	Thr Asp Ala Leu Ile Ile Asp	Gln	
355	360	365	
Thr His Asn Pro Gly Gly Ser Val	Phe Tyr Leu Tyr Ser	Leu Leu Ser	
370	375	380	
Met Leu Thr Asp His Pro Leu Asp Thr	Pro Lys His Arg Met Ile	Phe	
385	390	395	400
Thr Gln Asp Glu Val Ser Ser Ala	Leu His Trp Gln Asp	Leu Leu Glu	
405	410	415	
Asp Val Phe Thr Asp Glu Gln Ala	Val Ala Val Leu Gly	Glu Thr Met	
420	425	430	
Glu Gly Tyr Cys Met Asp Met His	Ala Val Ala Ser Leu Gln Asn	Phe	
435	440	445	
Ser Gln Ser Val Leu Ser Ser	Trp Val Ser Gly Asp	Ile Asn Leu Ser	
450	455	460	
Lys Pro Met Pro Leu Leu Gly	Phe Ala Gln Val Arg	Pro His Pro	Lys
465	470	475	480
His Gln Tyr Thr Lys Pro Leu Phe	Met Leu Ile Asp Glu Asp	Asp Phe	
485	490	495	
Ser Cys Gly Asp Leu Ala Pro Ala	Ile Leu Lys Asp Asn	Gly Arg Ala	
500	505	510	
Thr Leu Ile Gly Lys Pro Thr Ala	Gly Ala Gly Phe	Val Phe Gln	
515	520	525	
Val Thr Phe Pro Asn Arg Ser	Gly Ile Lys Gly	Leu Ser Leu Thr	Gly
530	535	540	
Ser Leu Ala Val Arg Lys Asp	Gly Glu Phe Ile	Glu Asn Leu Gly	Val
545	550	555	560
Ala Pro His Ile Asp Leu Gly	Phe Thr Ser Arg Asp	Leu Gln Thr	Ser
565	570	575	
Arg Phe Thr Asp Tyr Val Glu Ala	Val Lys Thr Ile Val	Leu Thr Ser	
580	585	590	
Leu Ser Glu Asn Ala Lys Lys	Ser Glu Glu Gln	Thr Ser Pro	Gln Glu
595	600	605	
Thr Pro Glu Val Ile Arg Val	Ser Tyr Pro Thr	Thr Thr Ser	Ala Leu
610	615	620	

<210>1090  
<211>310  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1090

Met Arg Lys Leu Ile Leu Cys Asn Pro Arg Gly Phe Cys Ser Gly Val  
       1                  5                 10                 15  
 Val Arg Ala Ile Gln Val Val Glu Val Ala Leu Glu Lys Trp Gly Ala  
       20                 25                 30  
 Pro Ile Tyr Val Lys His Glu Ile Val His Asn Arg His Val Val Asn  
       35                 40                 45  
 Ala Leu Arg Ala Lys Gly Ala Ile Phe Val Glu Glu Leu Val Asp Val  
       50                 55                 60  
 Pro Glu Gly Glu Arg Val Ile Tyr Ser Ala His Gly Ile Pro Pro Ser  
       65                 70                 75                 80  
 Val Arg Ala Glu Ala Lys Ala Arg Lys Leu Ile Asp Ile Asp Ala Thr  
       85                 90                 95  
 Cys Gly Leu Val Thr Lys Val His Ser Ala Ala Lys Leu Tyr Ala Ser  
       100                105                110  
 Lys Gly Tyr Lys Ile Leu Ile Gly His Lys Lys His Val Glu Val  
       115                120                125  
 Ile Gly Ile Val Gly Glu Val Pro Glu His Ile Thr Val Val Glu Lys  
       130                135                140  
 Val Ala Asp Val Glu Ala Leu Pro Phe Ser Ser Asp Thr Pro Leu Phe  
       145                150                155                160  
 Tyr Ile Thr Gln Thr Thr Leu Ser Leu Asp Asp Val Gln Glu Ile Ser  
       165                170                175  
 Ser Ala Leu Leu Lys Arg Tyr Pro Ser Ile Ile Thr Leu Pro Ser Ser  
       180                185                190  
 Ser Ile Cys Tyr Ala Thr Thr Asn Arg Gln Lys Ala Leu Arg Ser Val  
       195                200                205  
 Leu Ser Arg Val Asn Tyr Val Tyr Val Val Gly Asp Val Asn Ser Ser  
       210                215                220  
 Asn Ser Asn Arg Leu Arg Glu Val Ala Leu Arg Arg Gly Val Pro Ala  
       225                230                235                240  
 Asp Leu Ile Asn Asn Pro Glu Asp Ile Asp Thr Asn Ile Val Asn His  
       245                250                255  
 Ser Gly Asp Ile Ala Met Thr Ala Gly Ala Ser Thr Pro Glu Asp Val  
       260                265                270  
 Val Gln Ala Cys Ile Arg Lys Leu Ser Ser Leu Ile Pro Gly Leu Gln  
       275                280                285  
 Val Glu Asn Asp Ile Phe Ala Val Glu Asp Val Val Phe Gln Leu Pro  
       290                295                300  
 Lys Glu Leu Arg Cys Ser  
       305                310

&lt;210&gt;1091

&lt;211&gt;245

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1091

Arg Met Ser Tyr Phe Asn Tyr Gln Lys Asn Ser Val Val Leu Arg Ser  
       1                  5                 10                 15  
 Leu Gly Leu Leu Ala Lys Phe Phe Ser Arg Leu Leu Tyr Arg Val Phe  
       20                 25                 30  
 Phe Ser Phe Arg Glu Gly Ile Tyr Leu Phe Ser Ser Leu Tyr Leu Lys  
       35                 40                 45  
 Tyr Pro Arg Leu Phe Phe Tyr Asp Leu Gly Lys Tyr Val Tyr Ser Leu  
       50                 55                 60  
 Arg His Cys Pro Tyr Ala Lys Leu Gly Arg Leu Pro Gly Ala Ser Leu  
       65                 70                 75                 80  
 Leu Lys Glu Gly Asn Val Tyr Gly Glu Thr Pro Trp Ser Val Leu Ala  
       85                 90                 95  
 Lys Ile Cys Gln Ala Phe Asp Ile Thr Ser Gln Asp Ile Leu Tyr Asp  
       100                105                110  
 Leu Gly Cys Gly Leu Gly Lys Val Cys Phe Trp Phe Ser His Val Val  
       115                120                125  
 Arg Cys Gln Val Ile Gly Ile Asp Asn Gln Pro His Phe Ile Arg Phe  
       130                135                140  
 Ser Ser Asn Met His Arg Lys Leu Ser Ser Gly Phe Ala Leu Phe Asp

145	150	155	160
Thr Glu Glu Phe Lys Asn Val Val Leu Ser Gln Ala Ser Tyr Val Tyr			
165	170	175	
Phe Tyr Gly Ser Ser Phe Ser Arg Arg Leu Leu Asn Glu Ile Ile Leu			
180	185	190	
Lys Leu Ser Glu Met Ala Pro Gly Ser Val Val Ile Ser Ile Ser Phe			
195	200	205	
Pro Leu Asp Ser Phe Ser Arg Gly Lys Glu Cys Phe Phe Thr Glu Lys			
210	215	220	
Ser Cys Ser Val Arg Phe Pro Trp Gly Lys Thr Ile Ala Tyr Lys Asn			
225	230	235	240
Ile Arg Lys Gly Ser			
245			
<210>1092			
<211>385			
<212>PRT			
<213>Chlamydia pneumoniae			
<400>1092			
Lys Ser Leu Ser Ala Glu Ser Thr Ser Ser Asn Ser Thr Gly Lys Ala			
1	5	10	15
Ser Thr Glu Thr Thr Ser Ser Phe Pro Phe Phe Ser Cys Lys Ala			
20	25	30	
Pro Glu Gly Asp Ser Ser Val Asp Lys Thr Phe Thr Val Ser Val Gln			
35	40	45	
Thr Pro Lys Ala Gln Glu Gln Glu Ala Ser Ala Ser Gln Ser Gln			
50	55	60	
Ala Gln Phe His Val Arg Ser Tyr Ser Ser Thr Ile Lys Glu His			
65	70	75	80
Ser Ala Lys Glu Lys Val Ser Gln Ser Thr Lys Ser Ala Glu Thr Gln			
85	90	95	
Lys His Thr Gln Thr Lys Ser Asp Ala Thr Leu Ser Pro Met Ser Leu			
100	105	110	
Tyr Ser Thr Leu His Lys Glu Val Pro Gln Ala Leu Ser Ser Thr Lys			
115	120	125	
Ser Gln Gln Lys Asp Glu Glu His Arg Asp Gln Arg Gln Gln Glu Gly			
130	135	140	
Tyr Glu Gln Glu Gln Glu Glu Gly Lys Lys Lys Thr Pro Trp			
145	150	155	160
Cys Thr Val Glu Ser Leu Gln Gln Thr Ser Ser Ser Asn Gln Val Tyr			
165	170	175	
Glu Ser Tyr Thr Pro Ile Ile Pro Asp Pro Ile Val Glu Phe Ala Leu			
180	185	190	
Ser Glu Ser Gln Leu Ser Val Leu Ala Gly Lys Arg Val Thr Asn Leu			
195	200	205	
Asp Val Leu Arg Ile Cys Thr Glu Leu Met Lys Leu Met Leu Lys Ser			
210	215	220	
Arg Ala Asn Asp Thr Met Thr Arg Leu Glu Glu Arg Glu Leu Met Glu			
225	230	235	240
Arg Glu Ala His Glu Leu Ala Ala Ser Tyr Ser Arg Gln Ala Lys Tyr			
245	250	255	
Ala Arg Trp Leu Gly Ile Ala Thr Ala Thr Leu Gly Ile Leu Gly Ala			
260	265	270	
Ile Ala Pro Met Val Gly Glu Ile Ser Gly Asp Ser Ile Leu Gly Phe			
275	280	285	
Val Gln Arg Ile Ser Gly Arg Phe Lys Asp Ala Thr Ala Lys Thr Phe			
290	295	300	
Phe Lys Gly Ile Gly Lys Val Phe Thr Ser Leu Ser Gln Leu Thr Glu			
305	310	315	320
Ala Ala Ser Lys Val His Glu Leu Ser Glu Ser Ala Val Arg Ala Val			
325	330	335	
Ala Glu Tyr Arg Lys Glu Val Phe Arg Met Arg Gln Asp Glu Val Thr			
340	345	350	
Arg Thr Ile Glu Glu Val Lys Asp Asn Trp Lys Ser Met Asp Asn Phe			
355	360	365	

Leu Leu Asn Ile Leu Gln Thr Glu His Asp Ala Ala Arg S Leu Tyr  
 370 375 380  
 Gln  
 385  
 <210>1093  
 <211>112  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1093  
 Ile His Arg Arg Xaa Ile Met Thr Val Ser Tyr Gln Ser Ile Ser Thr  
 1 5 10 15  
 Pro Pro Pro Glu Gly Glu Phe Asp Ile Phe Val Asp Gly Asn Ala Thr  
 20 25 30  
 Glu Glu Ala Val Val Ala Ala Glu Val Gln Val Ala Leu Pro Ala Gly  
 35 40 45  
 Glu Gln Tyr Ala Met Leu Arg Ala Thr Ser Glu Leu Cys Phe Gly Ile  
 50 55 60  
 Xaa Thr Gln Ser Glu Cys Ala Leu Thr Gln Ala Leu Pro Pro Lys Glu  
 65 70 75 80  
 Lys Thr Ile Thr Arg Arg Ala Ile Ser Ser Lys Lys Trp His Ile Asn  
 85 90 95  
 Ala Ile Asn Ile Ser Ala Glu Pro Lys Thr Arg Thr Ile Ala Ala Asp  
 100 105 110  
 <210>1094  
 <211>515  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1094  
 Cys Gly Asn Ser Thr Met Ser Ser Trp Leu Ser Gln Ala Ser Glu Val  
 1 5 10 15  
 Leu Leu Asn Gln Asp Pro Tyr Ile Pro Asp Ala Pro Arg Ser Gln Glu  
 20 25 30  
 Ser Ser Val Pro Lys Ile Ser Tyr Ser Ile Thr Val Ala Pro Gln Glu  
 35 40 45  
 Ala Gln Lys Ser Leu Pro Lys Phe Phe Thr Gln Lys Phe Gln Ser Gln  
 50 55 60  
 Cys Lys Ser Glu Pro Pro Ile Thr His His Lys Thr Phe Ile Ile Ala  
 65 70 75 80  
 Thr Pro Arg Glu Arg Ile Leu Arg Phe Gly Ser Ser Phe Glu Ser Gln  
 85 90 95  
 Leu His Asn Thr Ser Gln Ala Gln Thr Ser Ser Pro Trp Asn Leu Phe  
 100 105 110  
 Ser Gln Lys Asn Ser Thr Glu Ala Ser Lys Ala Leu Met Gln Glu Leu  
 115 120 125  
 Thr Met Pro Lys Ser Pro Glu Lys Thr Ser Glu Lys Ala Leu Asp Lys  
 130 135 140  
 Asn Leu Ser Ser Lys Gln Glu Gly Ser Cys Lys Asn Phe Asp Thr Leu  
 145 150 155 160  
 His Leu Gln Gln His Leu Lys Leu Phe Gly Thr Val Asp Ser Leu Tyr  
 165 170 175  
 Ser Gln Ser Leu Asp Ser Glu Gln Gln Glu Leu Leu Gln Ser Arg Arg  
 180 185 190  
 Glu Glu Arg Ser Glu Thr Tyr Ala Asn Gln Gln Ser Ser Glu Lys Lys  
 195 200 205  
 Ile Glu Thr Lys Val Gln Ile Lys Asp Leu Cys Lys Asp Leu Phe Ser  
 210 215 220  
 Gln Asp Gln Asp Ser Asn Gln Lys Gln Lys Lys Ser Pro Phe Gln Gln  
 225 230 235 240  
 Asp Thr Ser Arg Lys Asn Arg Ile Ala Lys Ala Ala Gln Ala Val Pro  
 245 250 255  
 Val Ile Pro Pro Pro Ser Ile Gly Val Phe Thr Leu Ser Tyr Leu Leu  
 260 265 270  
 Thr Lys Gln Gly Ile Leu Ser Asp Phe Ser Ser Tyr Gly Cys His Lys  
 275 280 285

Asp Ser Val Glu      Thr Gln Arg Glu Leu Asp Ala Leu His Glu Lys  
                         290                        295                        300  
 Arg Ile Glu Thr Ile Lys Val Ser Ile Glu Lys Glu Lys Arg Glu Arg  
                         305                        310                        315                        320  
 Leu Trp Gly Ser Leu Ser Asp Ile Ile Gly Trp Leu Ala Pro Phe Val  
                         325                        330                        335  
 Ser Ile Gly Ile Gly Ile Val Ala Ile Leu Ser Gly Gly Gly Ile Phe  
                         340                        345                        350  
 Ala Phe Ala Gly Phe Phe Ala Gly Leu Ile Ser Leu Val Ile Lys Cys  
                         355                        360                        365  
 Leu Glu Lys Leu Lys Phe Trp Asp Trp Leu Glu Lys His Leu Pro Ile  
                         370                        375                        380  
 Asn Asn Glu Glu Leu Arg Arg Lys Ile Ile Thr Ile Ile Gln Trp Val  
                         385                        390                        395                        400  
 Val Tyr Leu Thr Pro Val Ile Leu Ser Ile Cys Thr Leu Lys Val Glu  
                         405                        410                        415  
 Asn Leu Gly Phe Ser Pro Ile Ile Glu Gly Ala Ile Lys Gly Ile Gln  
                         420                        425                        430  
 Pro Ala Ile Glu Ser Thr Met Ala Ala Leu Arg Cys Ala Ile Leu Phe  
                         435                        440                        445  
 Ser Gln Ala Glu Ile Tyr Lys Leu Lys Gly Leu Thr Lys Ile Gln  
                         450                        455                        460  
 Leu Asp Ile Glu Leu Lys Ser Phe Asp Arg Asp Asp His Tyr Glu Arg  
                         465                        470                        475                        480  
 Ser Gln Glu Leu Leu Asp Asn Met Glu Ser Ser Phe Glu Ala Leu Ser  
                         485                        490                        495  
 Arg Ile Leu Asn Tyr Met Arg Glu Leu Asp Gln Val Tyr Leu His Ser  
                         500                        505                        510  
 Leu Arg Gly  
                         515  
<210>1095  
<211>191  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1095

Cys Ile Glu Val Ile Glu Arg Thr Tyr Gly His Leu His Leu Gln Pro  
                         1                        5                        10                        15  
 Thr Pro Leu Met Ser His Leu Asn Tyr Leu Leu Glu Lys Ile Ala Ala  
                         20                        25                        30  
 Ser Ser Lys Glu Asp Phe Pro Phe Pro Asp Asp Leu Glu Ser Tyr Leu  
                         35                        40                        45  
 Glu Gly Tyr Val Pro Asp Lys Asn Ile Ala Leu Asp Thr Tyr Gln Lys  
                         50                        55                        60  
 Ile Phe Lys Ile Ser Ser Glu Asp Leu Glu Lys Val Tyr Lys Glu Gly  
                         65                        70                        75                        80  
 Tyr His Ala Tyr Leu Asp Lys Asp Tyr Ala Lys Ser Ile Thr Val Phe  
                         85                        90                        95  
 Arg Trp Leu Val Phe Phe Asn Pro Phe Val Ser Lys Phe Trp Phe Ser  
                         100                        105                        110  
 Leu Gly Ala Ser Leu His Met Ser Glu Gln Tyr Ser Gln Ala Leu His  
                         115                        120                        125  
 Ala Tyr Gly Val Thr Ala Val Leu Arg Asp Lys Asp Pro Tyr Pro His  
                         130                        135                        140  
 Tyr Tyr Ala Tyr Ile Cys Tyr Thr Leu Thr Asn Glu His Glu Glu Ala  
                         145                        150                        155                        160  
 Glu Lys Ala Leu Glu Met Ala Trp Val Arg Ala Gln His Lys Pro Leu  
                         165                        170                        175  
 Tyr Asn Glu Leu Lys Glu Glu Ile Leu Asp Ile Arg Lys His Lys  
                         180                        185                        190

&lt;210&gt;1096

&lt;211&gt;339

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1096

Thr Thr Ala Ser Ser Ser Asn Thr Lys Arg Leu Cys Cys Lys Lys Thr  
 1 5 10 15  
 Gln Arg Arg Pro Ser Pro Glu Thr Gln Ala Arg Ala Ser Leu Ser Gln  
 20 25 30  
 Ala Ser Ser Ser Gln Arg Ser Leu Pro Pro Gln Glu Ser Ala Pro  
 35 40 45  
 Glu Arg Thr Leu Leu Glu Gln Gln Lys Ala Ser Ser Phe Ser Pro Leu  
 50 55 60  
 Ser Gln Phe Ser Ala Glu Lys Gln Lys Glu Ala Leu Thr Thr Ser Lys  
 65 70 75 80  
 Ser His Glu Leu Tyr Lys Glu Arg Asp Gln Asp Arg Gln Gln Arg Glu  
 85 90 95  
 Gln His Asp Arg Lys His Asp Gln Glu Asp Ala Glu Ser Lys Lys  
 100 105 110  
 Lys Lys Lys Arg Gly Leu Gly Val Glu Ala Val Ala Glu Glu Pro  
 115 120 125  
 Gly Glu Asn Leu Asp Ile Ala Ala Leu Ile Phe Ser Asp Gln Met Arg  
 130 135 140  
 Pro Pro Ala Glu Glu Thr Ser Xaa Lys Glu Thr Thr Phe Lys Lys Lys  
 145 150 155 160  
 Leu Pro Ser Pro Met Ser Val Phe Ser Arg Phe Ile Pro Ser Lys Asn  
 165 170 175  
 Pro Leu Ser Val Gly Ser Ser Ile His Xaa Pro Ile Gln Thr Pro Lys  
 180 185 190  
 Val Glu Asn Val Phe Leu Arg Phe Met Lys Leu Met Ala Arg Ile Leu  
 195 200 205  
 Gly Gln Ala Glu Ala Glu Ala Asn Glu Leu Tyr Met Arg Val Lys Gln  
 210 215 220  
 Arg Thr Asp Asp Val Asp Thr Leu Thr Val Leu Ile Ser Lys Ile Asn  
 225 230 235 240  
 Asn Glu Lys Asp Ile Asp Trp Ser Glu Asn Glu Glu Met Lys Ala  
 245 250 255  
 Leu Leu Asn Arg Ala Lys Glu Ile Gly Val Thr Ile Asp Lys Glu Lys  
 260 265 270  
 Tyr Thr Trp Thr Glu Glu Lys Arg Leu Leu Lys Glu Asn Val Gln  
 275 280 285  
 Met Arg Lys Glu Asn Met Glu Lys Ile Thr Gln Met Glu Arg Thr Asp  
 290 295 300  
 Met Gln Arg His Leu Gln Glu Ile Ser Gln Cys His Gln Ala Arg Ser  
 305 310 315 320  
 Asn Val Leu Lys Leu Leu Lys Glu Leu Met Asp Thr Phe Ile Tyr Asn  
 325 330 335  
 Leu Arg Pro

<210>1097  
 <211>211  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1097  
 Phe Ser Phe Phe Tyr Ala Leu Lys Leu Gln Ile Met Asn Met Pro  
 1 5 10 15  
 Val Pro Ser Ala Val Pro Ser Ala Asn Ile Thr Leu Lys Glu Asp Ser  
 20 25 30  
 Ser Thr Val Ser Thr Ala Ser Gly Ile Leu Lys Thr Ala Thr Gly Glu  
 35 40 45  
 Val Leu Val Ser Cys Thr Ala Leu Glu Gly Ser Ser Thr Asp Ala  
 50 55 60  
 Leu Ile Ser Leu Ala Leu Gly Gln Ile Ile Leu Ala Thr Gln Gln Glu  
 65 70 75 80  
 Leu Leu Leu Gln Ser Thr Asn Val His Gln Leu Leu Phe Leu Pro Pro  
 85 90 95  
 Glu Val Val Glu Leu Glu Ile Gln Val Val Asp Leu Leu Val Gln Leu  
 100 105 110  
 Glu His Ala Glu Thr Ile Thr Ser Glu Pro Gln Glu Thr Gln Thr Gln

115	120
Ser Arg Ser Glu Gln Thr Leu Pro Gln Gln Ser Ser Ser Lys Gln Ser	
130	135
Ala Leu Ser Pro Arg Ser Leu Lys Pro Glu Ile Ser Asp Ser Lys Gln	140
145	150
Gln Gln Ala Leu Gln Thr Pro Lys Asp Ser Ala Val Arg Lys His Ser	155
165	170
Glu Asp Arg His Leu Arg His Lys Leu Ala Leu Pro Tyr Leu Arg Gln	175
180	185
Ala Gln Val Leu Arg Asp Pro Tyr Leu Arg Lys Lys Val Arg Gln Lys	190
195	200
Glu His Tyr	205
210	

&lt;210&gt;1098

&lt;211&gt;106

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1098

Ile Phe Leu Glu Ile Phe Ile Met Lys Lys Val Val Thr Leu Ser Ile	
1	5
5	10
10	15
Ile Phe Phe Ala Thr Tyr Cys Ala Ser Glu Leu Ser Ala Val Thr Val	
20	25
25	30
Val Ala Val Pro Leu Ser Glu Ala Pro Gly Lys Ile Gln Val Arg Pro	
35	40
40	45
Val Val Gly Leu Gln Phe Gln Glu Glu Gln Gly Ser Val Pro Tyr Ser	
50	55
55	60
Phe Tyr Tyr Pro Tyr Asp Tyr Gly Tyr Tyr Tyr Pro Glu Thr Tyr Gly	
65	70
70	75
75	80
Tyr Thr Lys Asn Thr Gly Gln Glu Ser Arg Glu Cys Tyr Thr Arg Phe	
85	90
90	95
Glu Asp Gly Thr Ile Phe Tyr Glu Cys Asp	
100	105

&lt;210&gt;1099

&lt;211&gt;301

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1099

Met Thr Met Pro Ser Thr Gln Phe His Thr Thr Ile Leu Glu Gln Phe	
1	5
5	10
10	15
Ser Leu Phe Leu Ser Val Asp Arg Gly Leu Cys Gln Gln Ser Ile Ala	
20	25
25	30
Ala Tyr Arg Gln Asp Ile Ser Ser Phe Leu Thr Ile Ser Ala Ile Ser	
35	40
40	45
Ser Pro Gln Asp Ile Ser Gln Asn Ser Val Tyr Ile Phe Ala Glu Glu	
50	55
55	60
Leu Tyr Arg Arg Lys Glu Ala Glu Thr Thr Leu Ala Arg Arg Leu Ile	
65	70
70	75
75	80
Ala Leu Lys Val Phe Phe Leu Phe Leu Lys Asp Gln Gln Leu Leu Pro	
85	90
90	95
Tyr Pro Pro Ile Ile Glu His Pro Lys Ile Trp Lys Arg Leu Pro Ser	
100	105
105	110
Val Leu Thr Pro Gln Glu Val Asp Ala Leu Leu Ala Val Pro Leu Gln	
115	120
120	125
Met Glu Lys Asn Pro Arg His Leu Ala Phe Arg Asp Thr Ala Ile Leu	
130	135
135	140
His Thr Leu Tyr Ser Thr Gly Val Arg Val Ser Glu Leu Cys Asp Leu	
145	150
150	155
155	160
Arg Leu Gly His Val Ser Asp Asp Cys Ile Arg Val Thr Gly Lys Gly	
165	170
170	175
Ser Lys Thr Arg Leu Val Pro Leu Gly Ser Arg Ala Arg Glu Ala Ile	
180	185
185	190
Asp Ala Tyr Leu Cys Pro Phe Arg Asp Gln Tyr Gln Lys Lys Asn Pro	
195	200
200	205
His Glu Asp His Leu Phe Leu Ser Thr Arg Gly His Lys Leu Glu Arg	

210	215	220
Ser Cys Val Trp Arg Arg	Ile His Asn Tyr Ala Lys Gln Val Thr Ser	
225	230	235
Lys Pro Val Ser Pro His Ser Leu Arg His Ala Phe Ala Thr His Leu		240
245	250	255
Leu Asp Asn Lys Ala Asp Leu Arg Val Ile Gln Glu Met Leu Gly His		
260	265	270
Ala Arg Ile Ala Ser Thr Glu Val Tyr Thr His Val Ala Ala Asp Ser		
275	280	285
Leu Ile Glu Lys Phe Leu Ala His His Pro Arg Asn Leu		
290	295	300
<210>1100		
<211>553		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1100		
Val Glu Gly Ile Val Ile Leu Ala Asn Glu Cys Asn Phe Ser Ile Gly		
1	5	10
Ser Gly Glu Phe Ser Ser Tyr Arg Glu Lys Thr Met Glu Arg Lys Arg		15
20	25	30
Phe Ile Asp Cys Asp Ser Thr Lys Ile Leu Gln Glu Leu Ala Leu Asn		
35	40	45
Pro Leu Asp Leu Thr Ala Pro Gly Val Leu Ser Ala Glu Arg Ile Lys		
50	55	60
Lys Phe Ser Leu Leu Gly Gly Phe Thr Phe Ser Phe Ala Thr Glu		
65	70	75
Arg Leu Asp Asp Ala Ile Leu Ala Ala Leu Ile Ser Leu Ala Glu Glu		80
85	90	95
Arg Gly Leu His Glu Ser Met Leu Ala Met Gln Gln Gly Gln Val Val		
100	105	110
Asn Tyr Ile Glu Gly Phe Pro Ser Glu Met Arg Pro Ala Leu His Thr		
115	120	125
Ala Thr Arg Ala Trp Val Thr Asp Ser Ser Phe Thr Gly Glu Ala Glu		
130	135	140
Asp Ile Ala Val Arg Ser Arg Val Glu Ala Gln Arg Leu Lys Asp Phe		
145	150	155
Leu Thr Lys Val Arg Ser Gln Phe Thr Thr Ile Val Gln Ile Gly Ile		160
165	170	175
Gly Gly Ser Glu Leu Gly Pro Lys Ala Leu Tyr Arg Ala Leu Arg Ala		
180	185	190
Tyr Cys Pro Thr Asp Lys His Val His Phe Ile Ser Asn Ile Asp Pro		
195	200	205
Asp Asn Gly Ala Glu Val Leu Asp Thr Ile Asp Cys Ala Lys Ala Leu		
210	215	220
Val Val Val Val Ser Lys Ser Gly Thr Thr Ile Glu Thr Ala Val Asn		
225	230	235
Glu Ala Phe Phe Ala Asp Tyr Phe Ala Lys Lys Gly Leu Ser Phe Lys		240
245	250	255
Asp His Phe Ile Ala Val Thr Cys Glu Gly Ser Pro Met Asp Asp Thr		
260	265	270
Gly Lys Tyr Leu Glu Val Phe His Leu Trp Glu Ser Ile Gly Gly Arg		
275	280	285
Phe Ser Ser Thr Ser Met Val Gly Gly Val Val Leu Gly Phe Ala Tyr		
290	295	300
Gly Phe Glu Val Phe Leu Gln Leu Leu Gln Gly Ala Ser Ala Met Asp		
305	310	315
Gln Ile Ala Leu Gln Pro Asn Ala Arg Glu Asn Leu Pro Met Leu Ser		320
325	330	335
Ala Leu Ile Ser Ile Trp Asn Arg Asn Phe Leu Gly Tyr Pro Thr Glu		
340	345	350
Ala Val Ile Pro Tyr Ser Ser Gly Leu Glu Phe Phe Pro Ala His Leu		
355	360	365
Gln Gln Cys Cys Met Glu Ser Asn Gly Lys Ser Ile Val Gln Asp Gly		
370	375	380

Arg Arg Val Gly      Ser Thr Ser Pro Val Ile Trp Gln Glu Pro Gly  
 385                    390                    395                    400  
 Thr Asn Gly Gln His Ser Phe Phe Gln Cys Leu His Gln Gly Thr Asp  
 405                    410                    415  
 Ile Ile Pro Val Glu Phe Ile Gly Phe Glu Lys Ser Gln Lys Gly Glu  
 420                    425                    430  
 Asp Ile Ser Phe Gln Gly Thr Thr Ser Ser Gln Lys Leu Phe Ala Asn  
 435                    440                    445  
 Met Ile Ala Gln Ala Ile Ala Leu Ala Cys Gly Ser Glu Asn Thr Asn  
 450                    455                    460  
 Pro Asn Lys Asn Phe Asp Gly Asn Arg Pro Ser Ser Val Leu Val Ser  
 465                    470                    475                    480  
 Ser Gln Leu Asn Pro Tyr Ser Leu Gly Glu Leu Leu Ser Tyr Tyr Glu  
 485                    490                    495  
 Asn Lys Ile Val Phe Gln Gly Phe Cys Trp Gly Ile Asn Ser Phe Asp  
 500                    505                    510  
 Gln Glu Gly Val Ser Leu Gly Lys Ala Leu Ala Asn Arg Val Leu Glu  
 515                    520                    525  
 Leu Leu Glu Gly Ala Asp Ala Ser Asn Phe Pro Glu Ala Ala Ser Leu  
 530                    535                    540  
 Leu Thr Leu Phe Asn Ile Lys Phe Arg  
 545                    550

&lt;210&gt;1101

&lt;211&gt;523

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1101

Asn Met Pro Gly Ser Val Ser Ser Pro Pro Leu Ser Pro Val Ile Val  
 1                    5                    10                    15  
 Arg Glu Arg Val Pro Ser Ser Ser Gly Ser Asp Leu Ile Gln Pro His  
 20                    25                    30  
 Ala Val Leu Lys Ile Ser Ile Leu Ile Phe Ala Leu Val Thr Ile Leu  
 35                    40                    45  
 Gly Ile Val Leu Val Val Ser Ser Ala Leu Gly Ala Leu Pro Ser Leu  
 50                    55                    60  
 Val Leu Thr Val Ser Gly Cys Ile Ala Ile Ala Val Gly Leu Ile Gly  
 65                    70                    75                    80  
 Leu Gly Ile Leu Val Thr Arg Leu Ile Leu Ser Thr Ile Arg Lys Val  
 85                    90                    95  
 Asp Ala Met Gly Tyr Asp Ala Ala Val Lys Glu Glu Gln Tyr Leu Ser  
 100                    105                    110  
 Arg Ile Arg Glu Leu Glu Ser Glu Asn Arg Glu Ile Arg Asp Arg Asn  
 115                    120                    125  
 Arg Ala Val Glu Asp Gln Cys Ala His Leu Ser Glu Glu Asn Lys Asp  
 130                    135                    140  
 Leu Arg Asp Pro Glu Tyr Leu His Gly Met Thr Glu Arg Leu Ile Ala  
 145                    150                    155                    160  
 Ser Leu Glu Ile Glu Asn Gln Ala Leu Val Ala Glu Asn Ile Leu Leu  
 165                    170                    175  
 Lys Asp Trp Asn Ala Ser Leu Ser Arg Asp Phe Arg Ala Tyr Lys Gln  
 180                    185                    190  
 Lys Phe Pro Leu Gly Ala Leu Glu Pro Trp Lys Glu Asp Ile Ala Cys  
 195                    200                    205  
 Ile Met Glu Gln Asn Leu Phe Leu Lys Pro Glu Cys Ile Ala Met Val  
 210                    215                    220  
 Lys Ser Leu Pro Leu Glu Thr Gln Arg Leu Phe Leu Tyr Pro Lys Gly  
 225                    230                    235                    240  
 Phe Gln Ser Leu Val Asn Arg Phe Ala Pro Arg Ser Arg Phe Phe Gln  
 245                    250                    255  
 Thr Pro Lys Tyr Glu Tyr Asn Ser Arg Asn Glu Asn Glu Asp Gly Lys  
 260                    265                    270  
 Val Ala Ala Val Cys Ala Arg Leu Lys Lys Glu Phe Phe Ser Ala Val  
 275                    280                    285  
 Leu Gly Ala Cys Ser Tyr Glu Glu Leu Gly Gly Ile Cys Glu Arg Ala

290	295	300
Val Ala Leu Lys Glu Thr	Leu Pro Leu Pro Glu	Ala Val Tyr Asp Thr
305	310	315
Leu Val Gln Glu Phe Pro Asn	Leu Leu Thr Ala Glu Ser	Leu Trp Lys
325	330	335
Glu Trp Cys Phe Tyr Ser Tyr	Pro Tyr Leu Arg Pro	Tyr Leu Ser Val
340	345	350
Asp Tyr Cys Lys Arg Leu Phe	Val Gln Leu Phe	Glu Leu Cys Leu
355	360	365
Lys Leu Phe Thr Thr Gly Ser	Pro Glu Asp Gln	Ala Leu Val Arg Leu
370	375	380
Phe Ser Tyr Tyr Arg Asn His	Ile Pro Ala Val	Leu Ala Ser Phe Gly
385	390	395
Leu Pro Pro Pro Glu Thr Gly	Gly Ser Val	Phe Val Leu Leu Pro Lys
405	410	415
Gln Glu Asn Leu Leu Trp Ser	Gln Ile Glu Val	Leu Ala Thr Arg Tyr
420	425	430
Leu Lys Asp Thr Phe Val Arg	Asn Ser Glu Trp	Thr Gly Ser Phe Glu
435	440	445
Met Met Phe Ser Tyr Asn	Glu Met Cys Lys	Glu Ile Ser Glu Gly Arg
450	455	460
Ile Arg Phe Ala Glu Asp	Tyr Glu Thr Arg His	Ser Glu Glu Phe Pro
465	470	475
Pro Ser Pro Leu Ser Glu	Glu Gly Glu	Glu Phe Leu Pro Pro
485	490	495
Cys Ser Glu Glu Val Ser Val	Leu Glu Arg Pro	Asp Leu Asp Val
500	505	510
Asp Ser Met Trp Val Trp His	Pro Ser Gly	Pro
515	520	

&lt;210&gt;1102

&lt;211&gt;335

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1102

Phe Phe Leu Lys Gly Val Arg	Met Ala Phe Lys Glu Val Val Arg Val		
1	5	10	15
Ala Val Thr Gly Gly Lys Gly	Gln Ile Ala Tyr Asn Phe	Leu Phe Ala	
20	25	30	
Leu Ala His Gly Asp Val Phe	Gly Val Asp Arg Gly Val Asp Leu Arg		
35	40	45	
Ile Tyr Asp Val Pro Gly	Thr Glu Arg Ala Leu Ser Gly Val Arg Met		
50	55	60	
Glu Leu Asp Asp Gly Ala	Tyr Pro Leu Xaa His Arg Leu Arg Val Thr		
65	70	75	80
Thr Ser Leu Asn Asp Ala	Phe Asp Gly Ile Asp Ala Ala Phe	Leu Ile	
85	90	95	
Gly Ala Val Pro Arg Gly	Pro Gly Met Glu Arg Gly Asp Leu Leu Lys		
100	105	110	
Gln Asn Gly Gln Ile Phe	Ser Leu Gln Gly Ala Ala Leu Asn Thr Ala		
115	120	125	
Ala Lys Arg Asp Ala Lys	Ile Phe Val Val Gly Asn Pro Val Asn Thr		
130	135	140	
Asn Cys Trp Ile Ala Met	Lys His Ala Pro Arg Leu His Arg Lys Asn		
145	150	155	160
Phe His Ala Met Leu Arg	Leu Asp Gln Asn Arg Met His Ser Met Leu		
165	170	175	
Ala His Arg Ala Glu Val	Pro Leu Glu Glu Val Ser Arg Val Val Ile		
180	185	190	
Trp Gly Asn His Ser Ala Lys	Gln Val Pro Asp Phe Thr Gln Ala Arg		
195	200	205	
Ile Ser Gly Lys Pro Ala Ala	Glu Val Ile Gly Asp Arg Asp Trp Leu		
210	215	220	
Glu Asn Ile Leu Val His	Ser Val Gln Asn Arg Gly Ser Ala Val Ile		
225	230	235	240

Glu Ala Arg Gly      Ser Ser Ala Ala Ser Ala Ser Ala Leu Ala  
                   245                        250                        255  
 Glu Ala Ala Arg Ser Ile Phe Cys Pro Lys Ser Asp Glu Trp Phe Ser  
                   260                        265                        270  
 Ser Gly Val Cys Ser Asp His Asn Pro Tyr Gly Ile Pro Glu Asp Leu  
                   275                        280                        285  
 Ile Phe Gly Phe Pro Cys Arg Met Leu Pro Ser Gly Asp Tyr Glu Ile  
                   290                        295                        300  
 Ile Pro Gly Leu Pro Trp Glu Pro Phe Ile Arg Asn Lys Ile Gln Ile  
                   305                        310                        315                        320  
 Ser Leu Asp Glu Ile Ala Gln Glu Lys Ala Ser Val Ser Ser Leu  
                   325                        330                        335

&lt;210&gt;1103

&lt;211&gt;82

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1103

Ser Glu His Thr Pro Glu Glu Asn His Ser Ser Leu Leu Gly Gln Lys  
   1                        5                        10                        15  
 Ile Asp Arg Ala Ala Ser Ala Ser Ala Arg Asp Ala Asp Ala Ala Glu  
   20                        25                        30  
 Asp Phe Pro Leu Ala Ser Ile Thr Ala Leu Pro Arg Phe Cys Thr Glu  
   35                        40                        45  
 Cys Thr Lys Met Phe Ser Asn Gln Ser Arg Ser Pro Ile Thr Ser Ala  
   50                        55                        60  
 Ala Gly Phe Pro Glu Ile Arg Ala Cys Val Lys Ser Gly Thr Cys Phe  
   65                        70                        75                        80  
 Ala Glu

&lt;210&gt;1104

&lt;211&gt;275

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1104

Ser Xaa Cys Ala Ser Lys Ala Leu Asn Val Pro Ile Val Ile Ser Gln  
   1                        5                        10                        15  
 Gly Ile Leu Arg Pro Ala Ile Asp Glu Asp Gln Ala Gln Leu Phe Thr  
   20                        25                        30  
 Glu Arg Val Glu Glu Phe Pro Lys Glu Val Glu Trp Trp Glu Xaa Ala  
   35                        40                        45  
 Arg Cys Glu Ile Ser Ile Pro Ser Met Val Ile Pro Pro Asn Leu Gly  
   50                        55                        60  
 Ala Leu Phe Ile Lys Ser Gly Val Thr Leu Asn Asn Asp Leu Tyr Ile  
   65                        70                        75                        80  
 Gln Gly Leu Ala Asp Ala Cys Met Lys Leu Gly Thr Gln Phe Tyr Asp  
   85                        90                        95  
 Glu Leu Ile Glu Asp Leu Ala Asp Ile Glu Glu Phe Tyr Asp His Ile  
   100                        105                        110  
 Ile Val Thr Pro Gly Ala Asn Ala Ser Ile Leu Pro Glu Leu Lys Asp  
   115                        120                        125  
 Met Pro Val Asn Lys Val Lys Gly Gln Leu Leu Glu Ile Ser Trp Pro  
   130                        135                        140  
 Lys Asp Leu Ala Met Leu Ser Phe Ser Ile Asn Ala His Lys Tyr Met  
   145                        150                        155                        160  
 Val Ala Asn Thr Gln Lys Asn Thr Cys Ile Leu Gly Ala Thr Phe Glu  
   165                        170                        175  
 His Asn Gln Pro Glu Glu Thr Pro Asp Pro Ala Ile Ala Tyr Gln Glu  
   180                        185                        190  
 Ile Met Pro Pro Val Leu Ser Leu Phe Pro Gly Leu Lys Asp Ala Gln  
   195                        200                        205  
 Val Leu His Cys Tyr Ala Gly Met Arg Ser Ser Lys Ser Arg Leu  
   210                        215                        220  
 Pro Val Ile Ser Arg Ile Arg Glu Lys Leu Trp Phe Leu Gly Gly Leu  
   225                        230                        235                        240

Gly Ser Lys Gly Leu Leu Tyr His Gly Ile Thr Gly Asp Met Leu Ala  
 245 250 255  
 Gln Ala Val Leu Arg Lys Ser Thr Ala Tyr Ile Ala Lys Glu Phe Leu  
 260 265 270  
 Phe Thr Ile  
 275  
 <210>1105  
 <211>485  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1105  
 Met Thr Ser Arg Thr Lys Ser Ser Lys Asn Leu Gly Thr Ile Ala Leu  
 1 5 10 15  
 Ala Gly Met Val Val Ser Ser Ile Ile Gly Gly Gly Ile Phe Ser Leu  
 20 25 30  
 Pro Gln Asn Met Ala Ala Thr Ala Gly Ala Gly Ala Val Ile Leu Ser  
 35 40 45  
 Trp Ile Leu Thr Gly Phe Gly Met Phe Phe Ile Ala Asn Thr Phe Arg  
 50 55 60  
 Ile Leu Ser Thr Ile Arg Pro Asp Leu Lys Glu Gly Ile Tyr Met Tyr  
 65 70 75 80  
 Ser Arg Glu Gly Phe Gly Pro Tyr Ile Gly Phe Thr Ile Gly Trp Gly  
 85 90 95  
 Tyr Trp Leu Cys Gln Ile Phe Gly Asn Val Gly Tyr Ala Val Ile Thr  
 100 105 110  
 Met Asp Ala Leu Asn Tyr Phe Phe Pro Pro Tyr Phe Gln Gly Gly Asn  
 115 120 125  
 Thr Leu Pro Ala Ile Leu Gly Gly Ser Ile Leu Ile Trp Val Phe Asn  
 130 135 140  
 Phe Ile Val Leu Lys Gly Ile Arg Gln Ala Ser Ile Ile Asn Val Ile  
 145 150 155 160  
 Gly Thr Ile Phe Lys Ile Ile Pro Leu Ile Ile Phe Ile Ile Leu Thr  
 165 170 175  
 Ala Phe Phe Phe Lys Leu Ala Val Phe Lys Thr Asp Phe Trp Gly His  
 180 185 190  
 Ala Val Thr Lys Ala Gln Pro Ser Leu Gly Ser Val Ser Ser Gln Leu  
 195 200 205  
 Lys Gly Thr Met Leu Val Thr Leu Trp Ala Phe Ile Gly Ile Glu Gly  
 210 215 220  
 Ala Val Val Met Ser Gly Arg Ala Lys Asn Pro Leu Ser Val Gly Gln  
 225 230 235 240  
 Ala Thr Val Leu Gly Phe Leu Gly Cys Leu Thr Ile Tyr Ile Leu Phe  
 245 250 255  
 Ser Leu Leu Pro Phe Gly Ser Leu Phe Gln His Gln Leu Ala Asn Ile  
 260 265 270  
 Pro Asn Pro Ser Thr Ala Gly Val Leu Asp Ile Leu Val Gly Lys Trp  
 275 280 285  
 Gly Glu Val Leu Met Asn Val Gly Leu Ile Ile Ala Val Leu Ser Ser  
 290 295 300  
 Trp Leu Ser Trp Thr Ile Ile Val Ala Glu Ile Pro Phe Ser Ala Ala  
 305 310 315 320  
 Lys Asn Gly Thr Phe Pro Glu Ile Phe Thr Ile Glu Asn Lys Glu Lys  
 325 330 335  
 Ser Pro Ser Val Ser Leu Tyr Ile Thr Ser Ser Val Met Gln Leu Ala  
 340 345 350  
 Met Leu Leu Val Tyr Phe Ser Ser Asn Ala Trp Asn Thr Met Leu Ser  
 355 360 365  
 Ile Thr Gly Val Met Val Leu Pro Ala Tyr Leu Ala Ser Ala Ala Phe  
 370 375 380  
 Leu Phe Lys Leu Ser Lys Ser Lys Thr Tyr Pro Lys Lys Gly Ser Ile  
 385 390 395 400  
 Lys Ala Pro Leu Ala Met Ile Thr Gly Ile Leu Gly Val Val Tyr Ser  
 405 410 415  
 Leu Trp Leu Ile Tyr Ala Gly Gly Leu Lys Tyr Leu Phe Met Ala Leu

420	425	430
Val Leu Leu Ala Leu Gly Ile Pro Phe Tyr Ile Asp Ala Gly Lys Lys		
435	440	445
Lys Lys Asn Ala Lys Thr Phe Phe Ala Lys Lys Glu Ile Val Gly Met		
450	455	460
Thr Phe Ile Gly Leu Leu Ala Leu Thr Ala Ile Phe Leu Phe Ser Thr		
465	470	475
Gly Arg Ile Lys Ile		
485		
<210>1106		
<211>196		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1106		
Leu Met Ala Tyr Gly Thr Arg Tyr Pro Thr Leu Ala Phe His Thr Gly		
1	5	10
Gly Ile Gly Glu Ser Asp Asp Gly Met Pro Pro Gln Pro Phe Glu Thr		
20	25	30
Phe Cys Tyr Asp Ser Ala Leu Leu Gln Ala Lys Ile Glu Asn Phe Asn		
35	40	45
Ile Val Pro Tyr Thr Ser Val Leu Pro Lys Glu Leu Phe Gly Asn Ile		
50	55	60
Val Pro Val Asp Thr Cys Val Lys Ser Phe Lys His Gly Ala Val Leu		
65	70	75
Glu Val Ile Met Ala Gly Arg Gly Ala Ala Leu Ser Asp Gly Thr His		
85	90	95
Ala Ile Ala Thr Gly Ile Gly Ile Cys Trp Gly Lys Asp Lys Asn Gly		
100	105	110
Glu Leu Ile Gly Gly Trp Ala Ala Glu Tyr Val Glu Phe Phe Pro Thr		
115	120	125
Trp Ile Asn Asp Glu Ile Ala Glu Thr His Ala Lys Met Trp Leu Lys		
130	135	140
Lys Ser Leu Gln His Glu Leu Asp Leu Arg Ser Ile Ala Lys His Ser		
145	150	155
Glu Phe Gln Phe Phe His Asn Tyr Ile Asn Ile Lys Gln Lys Phe Gly		
165	170	175
Phe Cys Leu Thr Ala Leu Gly Phe Leu Asn Phe Glu Asn Ala Glu Pro		
180	185	190
Ala Lys Val Asn		
195		
<210>1107		
<211>165		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1107		
Gln Lys Ala Thr Tyr Asn Phe Tyr Gly Tyr Ala Ser Trp Thr Pro Lys		
1	5	10
Pro Ser Cys Gly Asp Gly Gln Tyr Ser Val Leu Leu Tyr Ser Thr Arg		
20	25	30
Lys Val Pro Glu Gln Asn Ser Gln Val Thr Gly Trp Ser Leu Asn Ala		
35	40	45
Ala Gln His Ile His Glu Lys Leu Tyr Leu Phe Gly Arg Ile Asn Gly		
50	55	60
Ala Thr Gly Thr Ala Leu Pro Ile Asn Arg Ser Tyr Val Leu Gly Leu		
65	70	75
Val Ser Glu Asn Pro Leu Asn Arg His Ser Gln Asp Leu Leu Gly Ile		
85	90	95
Gly Phe Ala Thr Asn Lys Val Asn Ala Lys Ala Ile Ser Asn Val Asn		
100	105	110
Lys Leu Arg Arg Tyr Glu Ser Val Met Glu Ala Phe Ala Thr Ile Gly		
115	120	125
Phe Gly Pro Tyr Ile Ser Leu Thr Pro Asp Phe Gln Leu Tyr Ile His		
130	135	140
Pro Ala Leu Arg Pro Glu Arg Arg Thr Ser Gln Val Tyr Gly Leu Arg		

145 155 160

Ala Asn Leu Ser Leu  
165

<210>1108  
<211>354  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1108

Asn Asn Lys Lys Asp Tyr Ser Gly Glu Phe Leu Thr Thr Asp Thr  
1 5 10 15

Val Asp Ser Ile Ala Phe Leu Ser Ser Glu Glu Asn Phe Cys Tyr Ile  
20 25 30

Lys Thr Ile Leu Phe Phe Arg Val Lys Lys Lys His Tyr Ala Phe Phe  
35 40 45

Tyr Gly Glu Phe Met Ile Xaa Phe Arg Phe Leu Leu Leu Ser Gly Leu  
50 55 60

Cys Ala Leu Gly Ile Ser Ser Tyr Ala Glu Thr Pro Lys Glu Thr Thr  
65 70 75 80

Gly His Tyr His Arg Tyr Lys Ala Arg Ile Gln Lys Lys His Pro Glu  
85 90 95

Ser Ile Lys Glu Ser Ala Pro Ser Glu Thr Pro His His Asn Ser Leu  
100 105 110

Leu Ser Pro Val Thr Asn Ile Phe Cys Ser His Pro Trp Lys Asp Gly  
115 120 125

Ile Ser Val Ser Asn Leu Leu Thr Ser Val Glu Lys Ala Thr Asn Thr  
130 135 140

Gln Ile Ser Leu Asp Phe Ser Ile Leu Pro Gln Trp Phe Tyr Pro His  
145 150 155 160

Lys Ala Leu Gly Gln Thr Gln Ala Leu Glu Ile Pro Ser Trp Gln Phe  
165 170 175

Tyr Phe Ser Pro Ser Thr Thr Trp Thr Leu Tyr Asp Ser Pro Thr Ala  
180 185 190

Gly Gln Gly Ile Val Asp Phe Ser Tyr Thr Leu Ile His Tyr Trp Gln  
195 200 205

Thr Asn Gly Val Asp Ala Asn Gln Ala Ala Gly Thr Ala Ser Ser Met  
210 215 220

Asn Asp Tyr Ser Asn Arg Glu Asn Asn Leu Ala Gln Leu Thr Phe Ser  
225 230 235 240

Gln Thr Phe Pro Gly Asp Phe Leu Thr Leu Ala Ile Gly Gln Tyr Ser  
245 250 255

Leu Tyr Ala Ile Asp Gly Thr Leu Tyr Asp Asn Asp Gln Tyr Ser Gly  
260 265 270

Phe Ile Ser Tyr Ala Leu Ser Gln Asn Ala Ser Ala Thr Tyr Ser Leu  
275 280 285

Gly Ser Thr Gly Ala Tyr Leu Gln Phe Thr Pro Asn Ser Glu Ile Lys  
290 295 300

Val Gln Leu Gly Phe Gln Asp Ser Tyr Asn Ile Asp Gly Thr Asn Phe  
305 310 315 320

Ser Ile Tyr Asn Leu Thr Lys Ser Asn Ile Gln Leu Leu Arg Leu Arg  
325 330 335

Leu Leu Asp Ser Lys Thr Phe Val Trp Arg Trp Thr Val Leu Cys Ile  
340 345 350

Ala Leu

<210>1109  
<211>286  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1109

Lys Thr Ser Trp Gln Lys Tyr Lys Lys Tyr Leu Ser Tyr Ser Ile Leu  
1 5 10 15

Val Gln Lys Ile Ala Arg Tyr Val Met Lys Thr Trp Leu Phe Phe Thr  
20 25 30

Phe Leu Phe Ser Cys Ser Ser Phe Tyr Ala Ser Cys Arg Tyr Ala Glu

35	40		
Val Arg Ser Ile His Glu Val Ala Gly Asp Ile Leu Tyr Asp Glu Glu			
50	55	60	
Asn Phe Trp Leu Ile Leu Asp Leu Asp Asp Thr Leu Leu Gln Gly Gly			
65	70	75	80
Glu Ala Leu Ser His Ser Ile Trp Lys Ser Lys Ala Ile Gln Gly Leu			
85	90	95	
Gln Lys Gln Gly Thr Pro Glu Gln Glu Ala Trp Glu Ala Val Val Pro			
100	105	110	
Phe Trp Ile Glu Ile Gln Glu Met Gly Thr Val Gln Pro Ile Glu Ser			
115	120	125	
Ala Ile Phe Leu Leu Ile Glu Lys Ile Gln Lys Gln Gly Lys Thr Thr			
130	135	140	
Phe Val Tyr Thr Glu Arg Pro Lys Thr Ala Lys Asp Leu Thr Leu Lys			
145	150	155	160
Gln Leu His Met Leu Asn Val Ser Leu Glu Asp Thr Ala Pro Gln Pro			
165	170	175	
Gln Ala Pro Leu Pro Lys Asn Leu Leu Tyr Thr Ser Gly Ile Leu Phe			
180	185	190	
Ser Gly Asp Tyr His Lys Gly Pro Gly Leu Asp Leu Phe Leu Glu Ile			
195	200	205	
Cys Thr Pro Leu Pro Ala Lys Ile Ile Tyr Ile Asp Asn Gln Lys Glu			
210	215	220	
Asn Val Leu Arg Ile Gly Asp Leu Cys Gln Lys Tyr Gly Ile Ala Tyr			
225	230	235	240
Phe Gly Ile Thr Tyr Lys Ala Gln Glu Leu His Pro Pro Ile Tyr Phe			
245	250	255	
Asp Asn Ile Ala Gln Val Gln Tyr Asn Tyr Ser Lys Lys Leu Leu Ser			
260	265	270	
Asn Glu Ala Ala Ala Leu Leu Leu Arg His Gln Met His Glu			
275	280	285	

&lt;210&gt;1110

&lt;211&gt;504

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1110

Val Val Gln Leu Pro Leu Met Val Pro Ile Val His Leu Gln Ile Trp			
1	5	10	15
Arg Phe Ser Met Ile Tyr Tyr Gly Val Ser Val Met Leu Cys Ala Thr			
20	25	30	
Val Ser Gly Pro Ser Phe Cys Glu Ala Lys Gln Gln Ile Leu Lys Ser			
35	40	45	
Leu His Leu Val Asp Ile Ile Glu Leu Arg Leu Asp Leu Ile Asn Glu			
50	55	60	
Leu Asp Asp Gln Glu Leu His Thr Leu Ile Thr Thr Ala Gln Asn Pro			
65	70	75	80
Ile Leu Thr Phe Arg Gln His Lys Glu Met Ser Thr Ala Leu Trp Ile			
85	90	95	
Gln Lys Leu Tyr Ser Leu Ala Lys Leu Glu Pro Lys Trp Met Asp Ile			
100	105	110	
Asp Val Ser Leu Pro Lys Thr Ala Leu Gln Thr Ile Arg Lys Ser His			
115	120	125	
Pro Lys Ile Lys Leu Ile Leu Ser Tyr His Thr Asp Lys Asn Glu Asp			
130	135	140	
Leu Asp Ala Ile Tyr Asn Glu Met Leu Ala Thr Pro Ala Glu Ile Tyr			
145	150	155	160
Lys Ile Val Leu Ser Pro Glu Asn Ser Ser Glu Ala Leu Asn Tyr Ile			
165	170	175	
Lys Lys Ala Arg Leu Leu Pro Lys Pro Ser Thr Val Leu Cys Met Gly			
180	185	190	
Thr His Gly Leu Pro Ser Arg Val Leu Ser Pro Leu Ile Ser Asn Ala			
195	200	205	
Met Asn Tyr Ala Ala Gly Ile Ser Ala Pro Gln Val Ala Pro Gly Gln			
210	215	220	

Pro Lys Leu Glu Glu Leu Leu Ser Tyr Asn Tyr Ser Lys Leu Ser Glu  
 225 230 235 240  
 Lys Ser His Ile Tyr Gly Leu Ile Gly Asp Pro Val Asp Arg Ser Ile  
 245 250 255  
 Ser His Leu Ser His Asn Phe Leu Leu Ser Lys Leu Ser Leu Asn Ala  
 260 265 270  
 Thr Tyr Ile Lys Phe Pro Val Thr Ile Gly Glu Val Val Thr Phe Phe  
 275 280 285  
 Ser Ala Ile Arg Asp Leu Pro Phe Ser Gly Leu Ser Val Thr Met Pro  
 290 295 300  
 Leu Lys Thr Ala Ile Phe Asp His Val Asp Ala Leu Asp Ala Ser Ala  
 305 310 315 320  
 Gln Leu Cys Glu Ser Ile Asn Thr Leu Val Phe Arg Asn Gln Lys Ile  
 325 330 335  
 Leu Gly Tyr Asn Thr Asp Gly Glu Gly Val Ala Lys Leu Leu Lys Gln  
 340 345 350  
 Lys Asn Ile Ser Val Asn Asn Lys His Ile Ala Ile Val Gly Ala Gly  
 355 360 365  
 Gly Ala Ala Lys Ala Ile Ala Ala Thr Leu Ala Met Gln Gly Ala Asn  
 370 375 380  
 Leu His Ile Phe Asn Arg Thr Leu Ser Ser Ala Ala Leu Ala Thr  
 385 390 395 400  
 Cys Cys Lys Gly Lys Ala Tyr Pro Leu Gly Ser Leu Glu Asn Phe Lys  
 405 410 415  
 Thr Ile Asp Ile Ile Asn Cys Leu Pro Pro Glu Val Thr Phe Pro  
 420 425 430  
 Trp Arg Phe Pro Pro Ile Val Met Asp Ile Asn Thr Lys Pro His Pro  
 435 440 445  
 Ser Pro Tyr Leu Glu Arg Ala Gln Lys His Gly Ser Leu Ile Ile His  
 450 455 460  
 Gly Tyr Glu Met Phe Ile Glu Gln Ala Leu Leu Gln Phe Ala Leu Trp  
 465 470 475 480  
 Phe Pro Asp Phe Leu Thr Pro Glu Ser Cys Asp Ser Phe Arg Asn Tyr  
 485 490 495  
 Val Lys Asn Phe Met Ala Lys Val  
 500

&lt;210&gt;1111

&lt;211&gt;384

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1111

Met Leu Gln Thr Ile Met Ser Glu Thr Ile Ile Thr Thr Pro His Val  
 1 5 10 15  
 Val Lys Leu Ile Ser Asn Phe Phe Gln Lys Lys Leu Phe Ser Ser Ile  
 20 25 30  
 Ser Thr Ala Tyr Pro Leu Val Ile Ile Thr Asp Val Ser Val Gln Gln  
 35 40 45  
 His Leu Leu Gly Pro Ile Leu Asp His Ile Lys Met Leu Gly Tyr Gln  
 50 55 60  
 Val Ile Val Leu Thr Phe Pro Pro Gly Glu Pro Asn Lys Thr Trp Glu  
 65 70 75 80  
 Thr Phe Ile Ser Leu Gln Tyr Gln Leu Val Asp Gln Asn Ile Ser Pro  
 85 90 95  
 Lys Ser Ser Ile Ile Gly Ile Gly Gly Thr Val Leu Asp Met Thr  
 100 105 110  
 Gly Phe Leu Ala Ala Thr Tyr Cys Arg Gly Leu Pro Leu Tyr Leu Ile  
 115 120 125  
 Pro Thr Thr Ile Thr Ala Met Val Asp Thr Ser Ile Gly Gly Lys Asn  
 130 135 140  
 Gly Ile Asn Leu Arg Gly Ile Lys Asn Arg Leu Gly Thr Phe Tyr Leu  
 145 150 155 160  
 Pro Lys Glu Val Trp Met Cys Pro Gln Phe Leu Ser Thr Leu Pro Arg  
 165 170 175  
 Glu Glu Trp Tyr His Gly Ile Ala Glu Ala Ile Lys His Gly Phe Ile

180	185	190
Ala Asp Ala Tyr Leu Trp Glu Phe Leu Asn Ser His Ser Lys Met Leu		
195	200	205
Phe Ser Ser Ser Gln Ile Leu His Glu Phe Ile Lys Arg Asn Cys Gln		
210	215	220
Ile Lys Ala Ala Ile Val Ala Glu Asp Pro Tyr Asp Arg Ser Leu Arg		
225	230	235
Lys Ile Leu Asn Phe Gly His Ser Ile Ala His Ala Ile Glu Thr Leu		240
245	250	255
Ala Lys Gly Thr Val Asn His Gly Gln Ala Val Ser Val Gly Met Met		
260	265	270
Ile Glu Thr Arg Ile Ser Leu Ala Glu Gly Val Met Lys Thr Pro Gln		
275	280	285
Leu Ile Asp Gln Leu Glu Arg Leu Leu Lys Arg Phe Asn Leu Pro Ser		
290	295	300
Thr Leu Lys Asp Leu Gln Ser Ile Val Pro Glu His Leu His Asn Ser		
305	310	315
Leu Tyr Ser Pro Glu Asn Ile Ile Tyr Thr Leu Gly Tyr Asp Lys Lys		320
325	330	335
Asn Leu Ser Gln His Glu Leu Lys Met Ile Met Ile Glu His Leu Gly		
340	345	350
Arg Ala Ala Pro Phe Asn Gly Thr Tyr Cys Ala Ser Pro Asn Met Glu		
355	360	365
Ile Leu Tyr Asp Ile Leu Trp Ser Glu Cys His Val Met Arg His Cys		
370	375	380

&lt;210&gt;1112

&lt;211&gt;376

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1112

Thr Ser Val Ser Arg Ser His Tyr Leu Val Lys Val Met Lys Asn Ser		
1	5	10
Phe Gly Ser Leu Phe Ser Phe Thr Thr Trp Gly Glu Ser His Gly Pro		15
20	25	30
Ser Ile Gly Val Val Ile Asp Gly Cys Pro Ala Gly Leu Glu Leu His		
35	40	45
Glu Ser Asp Phe Val Pro Ala Met Lys Arg Arg Arg Pro Gly Asn Pro		
50	55	60
Gly Thr Ser Ser Arg Lys Glu Asn Asp Ile Val Gln Ile Leu Ser Gly		
65	70	75
Val Tyr Lys Gly Lys Thr Thr Gly Thr Pro Leu Ser Leu Gln Ile Leu		80
85	90	95
Asn Thr Asp Val Asp Ser Ser Pro Tyr Glu Asn Ser Glu Arg Leu Tyr		
100	105	110
Arg Pro Gly His Ser Gln Tyr Thr Tyr Glu Lys Lys Phe Gly Ile Val		
115	120	125
Asp Pro Asn Gly Gly Arg Ser Ser Ala Arg Glu Thr Ala Cys Arg		
130	135	140
Val Ala Ala Gly Val Val Ala Glu Lys Phe Leu Ala Asn Gln Asn Ile		
145	150	155
Phe Thr Leu Ala Tyr Leu Ser Ser Leu Gly Ser Leu Thr Leu Pro His		160
165	170	175
Tyr Leu Lys Ile Ser Pro Glu Leu Ile His Lys Ile His Thr Ser Pro		
180	185	190
Phe Tyr Ser Pro Leu Pro Asn Glu Lys Ile Gln Glu Ile Leu Thr Ser		
195	200	205
Leu His Asp Asp Ser Asp Ser Leu Gly Gly Val Ile Ser Phe Ile Thr		
210	215	220
Ser Pro Ile His Asp Phe Leu Gly Glu Pro Leu Phe Gly Lys Val His		
225	230	235
Ala Leu Leu Ala Ser Ala Leu Met Ser Ile Pro Ala Ala Lys Gly Phe		240
245	250	255
Glu Ile Gly Lys Gly Phe Ala Ser Ala Gln Met Arg Gly Ser Gln Tyr		
260	265	270

Thr Asp Pro Phe Val Met Glu Gly Glu Asn Ile Thr Leu Ly Ser Asn  
 275 280 285  
 Asn Cys Gly Gly Thr Leu Gly Gly Ile Thr Ile Gly Val Pro Ile Glu  
 290 295 300  
 Gly Arg Ile Ala Phe Lys Pro Thr Ser Ser Ile Lys Arg Pro Cys Ala  
 305 310 315 320  
 Thr Val Thr Lys Thr Lys Lys Glu Thr Thr Tyr Arg Thr Pro Gln Thr  
 325 330 335  
 Gly Arg His Asp Pro Cys Val Ala Ile Arg Ala Val Pro Val Val Glu  
 340 345 350  
 Ala Met Ile Asn Leu Val Leu Ala Asp Leu Val Leu Tyr Gln Arg Cys  
 355 360 365  
 Ser Lys Leu Ser Cys Gln Arg Gln  
 370 375  
 <210>1113  
 <211>184  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1113  
 Trp Lys Leu Glu Leu Arg Asn Val Met Thr Ile Ile Leu Cys Gly Leu  
 1 5 10 15  
 Pro Thr Ser Gly Lys Ser Ser Leu Gly Lys Ala Leu Ala Lys Phe Leu  
 20 25 30  
 Asn Leu Pro Phe Tyr Asp Leu Asp Asp Leu Ile Val Ser Asn Tyr Ser  
 35 40 45  
 Ser Ala Leu Tyr Ser Ser Ala Glu Ile Tyr Lys Ala Tyr Gly Asp  
 50 55 60  
 Gln Lys Phe Ser Glu Cys Glu Ala Arg Ile Leu Glu Thr Leu Pro Pro  
 65 70 75 80  
 Glu Asp Ala Leu Ile Ser Leu Gly Gly Thr Leu Met Tyr Glu Ala  
 85 90 95  
 Ser Tyr Arg Ala Ile Gln Thr Arg Gly Ala Leu Val Phe Leu Ser Val  
 100 105 110  
 Glu Leu Pro Leu Ile Tyr Glu Arg Leu Glu Lys Arg Gly Leu Pro Glu  
 115 120 125  
 Arg Leu Lys Glu Ala Met Lys Thr Lys Pro Leu Ser Glu Ile Leu Thr  
 130 135 140  
 Glu Arg Ile Asp Arg Met Lys Glu Ile Ala Asp Tyr Ile Phe Pro Val  
 145 150 155 160  
 Asp His Val Asp His Ser Ser Lys Ser Ser Leu Glu Gln Ala Ser Gln  
 165 170 175  
 Asp Leu Ile Thr Leu Leu Lys Ser  
 180  
 <210>1114  
 <211>449  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1114  
 Val Cys Phe Thr Met Leu Thr Tyr Lys Val Ser Pro Ser Ser Val Tyr  
 1 5 10 15  
 Gly Asn Ala Phe Ile Pro Ser Ser Lys Ser His Thr Leu Arg Ala Ile  
 20 25 30  
 Leu Trp Ala Ser Val Ala Glu Gly Lys Ser Thr Ile Tyr Asn Tyr Leu  
 35 40 45  
 Asp Ser Pro Asp Thr Glu Ala Met Ile Cys Ala Cys Lys Gln Met Gly  
 50 55 60  
 Ala Ser Ile Lys Lys Phe Pro Gln Ile Leu Glu Ile Val Gly Asn Pro  
 65 70 75 80  
 Leu Ala Ile Phe Pro Lys Tyr Thr Leu Ile Asp Ala Gly Asn Ser Gly  
 85 90 95  
 Ile Val Leu Arg Phe Met Thr Ala Leu Ala Cys Val Phe Ser Lys Glu  
 100 105 110  
 Ile Thr Val Thr Gly Ser Ser Gln Leu Gln Arg Arg Pro Met Ala Pro  
 115 120 125

Leu	Leu	Gln	Ala	Arg	Asn	Phe	Gly	Ala	Ser	Phe	H	Phe	Ser	Ser	
130				135						140					
Asp	Lys	Ser	Val	Leu	Pro	Phe	Thr	Met	Ser	Gly	Pro	Leu	Arg	Ser	Ala
145				150					155				160		
Tyr	Ser	Asp	Val	Glu	Gly	Ser	Asp	Ser	Gln	Phe	Ala	Ser	Ala	Leu	Ala
				165					170				175		
Val	Ala	Cys	Ser	Leu	Ala	Glu	Gly	Pro	Cys	Ser	Phe	Thr	Ile	Ile	Glu
				180				185				190			
Pro	Lys	Glu	Arg	Pro	Trp	Phe	Asp	Leu	Ser	Leu	Trp	Trp	Leu	Glu	Lys
				195			200				205				
Leu	His	Leu	Pro	Tyr	Ser	Cys	Ser	Asp	Thr	Thr	Tyr	Ser	Phe	Pro	Gly
				210			215			220					
Ser	Ser	His	Pro	Gln	Gly	Phe	Ser	Tyr	His	Val	Thr	Gly	Asp	Phe	Ser
				225			230			235			240		
Ser	Ala	Ala	Phe	Ile	Ala	Ala	Ala	Ala	Leu	Leu	Ser	Lys	Ser	Leu	Gln
				245			250			255					
Pro	Ile	Arg	Leu	Arg	Asn	Leu	Asp	Ile	Leu	Asp	Ile	Gln	Gly	Asp	Lys
				260			265			270					
Ile	Phe	Phe	Ser	Leu	Met	Gln	Asn	Leu	Gly	Ala	Ser	Ile	Gln	Tyr	Asp
				275			280			285					
Asn	Glu	Glu	Ile	Leu	Val	Phe	Pro	Ser	Ser	Phe	Ser	Gly	Gly	Ser	Ile
				290			295			300					
Asp	Met	Asp	Gly	Cys	Ile	Asp	Ala	Leu	Pro	Ile	Leu	Thr	Val	Leu	Cys
				305			310			315			320		
Cys	Phe	Ala	Asp	Ser	Pro	Ser	His	Leu	Tyr	Asn	Ala	Arg	Ser	Ser	Lys
				325			330			335					
Asp	Lys	Glu	Ser	Asp	Arg	Ile	Leu	Ala	Ile	Thr	Glu	Glu	Leu	Gln	Lys
				340			345			350					
Met	Gly	Ala	Cys	Ile	Gln	Pro	Thr	His	Asp	Gly	Leu	Leu	Val	Asn	Pro
				355			360			365					
Ser	Pro	Leu	Tyr	Gly	Ala	Val	Leu	Asp	Ser	His	Asp	Asp	His	Arg	Ile
				370			375			380					
Ala	Met	Ala	Leu	Thr	Ile	Ala	Ala	Leu	Tyr	Ala	Ser	Gly	Asp	Ser	Arg
				385			390			395			400		
Ile	His	Asn	Thr	Ala	Cys	Val	Arg	Lys	Thr	Phe	Pro	Asn	Phe	Val	Gln
				405			410			415					
Thr	Leu	Asn	Ile	Met	Glu	Ala	Arg	Ile	Glu	Glu	Cys	His	Asp	Asn	Tyr
				420			425			430					
Ser	Met	Trp	Ser	Thr	His	Lys	Arg	Lys	Val	Phe	Ala	Arg	Glu	Ser	Phe
				435			440			445					
Gly															

&lt;210&gt;1115

&lt;211&gt;96

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1115

Arg	Cys	Glu	Gly	Glu	Ser	Ala	Lys	Gln	Gln	Arg	Thr	Val	Arg	Met	Gly
1				5				10			15				
Arg	Ala	Ser	Ile	Gln	Pro	Ser	Ile	Ser	Ile	Glu	Pro	Pro	Glu	Asn	Asp
				20				25			30				
Glu	Gly	Asn	Thr	Lys	Ile	Ser	Ser	Leu	Ser	Tyr	Cys	Ile	Glu	Ala	Pro
				35			40			45					
Lys	Phe	Cys	Met	Arg	Glu	Lys	Lys	Ile	Leu	Ser	Pro	Trp	Ile	Ser	Lys
				50			55			60					
Met	Ser	Lys	Leu	Arg	Arg	Arg	Ile	Gly	Trp	Ser	Asp	Phe	Glu	Ser	Arg
				65			70			75			80		
Ala	Ala	Ala	Ala	Met	Lys	Ala	Ala	Leu	Leu	Lys	Ser	Pro	Val	Thr	Trp
					85			90			95				

&lt;210&gt;1116

&lt;211&gt;283

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1116

Arg Pro Ser Gln Ser Leu Phe Leu Arg Thr Trp Ser Pro Ser Ser Ser  
 1 5 10 15  
 Phe Arg Glu His Thr Val Cys Ala Ala Pro Leu Leu Tyr Pro Arg Arg  
 20 25 30  
 Arg Ser Pro Asp Tyr Leu Phe Ser Pro Thr Gly Cys Pro Met Ser Thr  
 35 40 45  
 Thr Thr Val Lys His Phe Ile His Thr Ala Ser Arg Trp Glu Pro Val  
 50 55 60  
 Leu Lys Glu Ile Val Ala Ser Asn Tyr Trp His Ala Gln Trp Ile Asn  
 65 70 75 80  
 Thr Leu Ser Phe Leu Glu Asn Ser Gly Ala Lys Lys Ile Ser Ala Ser  
 85 90 95  
 Glu His Pro Thr Glu Val Lys Glu Glu Val Leu Lys His Ala Ala Glu  
 100 105 110  
 Glu Phe Arg His Gly His Tyr Leu Lys Thr Gln Ile Ser Arg Ile Ser  
 115 120 125  
 Glu Thr Ser Leu Pro Asp Tyr Thr Ser Lys Asn Leu Leu Gly Gly Leu  
 130 135 140  
 Leu Thr Lys Tyr Tyr Leu His Leu Leu Asp Leu Arg Thr Cys Arg Val  
 145 150 155 160  
 Leu Glu Asn Glu Tyr Ser Leu Ser Gly Gln Thr Leu Lys Thr Ala Ala  
 165 170 175  
 Tyr Ile Leu Val Thr Tyr Ala Ile Glu Leu Arg Ala Ser Glu Leu Tyr  
 180 185 190  
 Pro Leu Tyr His Asp Ile Leu Lys Glu Ala Gln Ser Lys Ile Thr Val  
 195 200 205  
 Lys Ser Ile Ile Leu Glu Glu Gln Gly His Leu Gln Glu Met Glu Arg  
 210 215 220  
 Glu Leu Lys Asp Leu Pro His Gly Glu Gly Thr Leu Arg Leu Cys Leu  
 225 230 235 240  
 Pro Ile Arg Arg Gly Ala Leu Leu Ala Val Cys Arg Glu Ile Arg Thr  
 245 250 255  
 Asn Asp Leu Arg Ser Phe Leu Asp Phe Tyr Lys Val Leu Glu Phe Phe  
 260 265 270  
 Leu Asp Asp Lys Ser Glu Val Arg Gln Ile Thr  
 275 280

&lt;210&gt;1117

&lt;211&gt;505

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1117

Leu Val Met Phe Leu Asp Phe Ser Glu Pro Ser Ile Ser Arg Lys Tyr  
 1 5 10 15  
 Gln Ser His Leu Phe Asn Gly Arg Ser Asn Ala Leu Thr Lys Pro Gln  
 20 25 30  
 Tyr Leu Arg Tyr Gly Gly Lys Trp Val Ser Arg Gly Arg Arg Ala Leu  
 35 40 45  
 Ala Asn Ser Arg Asn Gln Ala Ser Tyr Asn Arg Asp Ser Cys Gln Gly  
 50 55 60  
 Lys Arg Asn His Lys Asp Asn His Lys Leu Leu Cys Arg Thr Met Glu  
 65 70 75 80  
 Gly Ser Met Asp Lys Gln Ser Ser Gly Asn Ser Gly Cys Ile Trp His  
 85 90 95  
 Pro Phe Thr Gln Ser Ala Leu Asp Ser Thr Pro Ile Lys Ile Val Arg  
 100 105 110  
 Gly Glu Gly Ala Tyr Leu Tyr Ala Glu Ser Gly Thr Arg Tyr Leu Asp  
 115 120 125  
 Ala Ile Ser Ser Trp Trp Cys Asn Leu His Gly His Gly His Pro Tyr  
 130 135 140  
 Ile Thr Lys Lys Leu Cys Glu Gln Ala Gln Lys Leu Glu His Val Ile  
 145 150 155 160  
 Phe Ala Asn Phe Thr His Glu Pro Ala Leu Glu Leu Val Ser Lys Leu  
 165 170 175  
 Ala Pro Leu Leu Pro Glu Gly Leu Glu Arg Phe Phe Ser Asp Asn

	180	185	190
Gly Ser Thr Ser Ile Glu Ile Ala Met Lys Ile Ala Val Gln Tyr Tyr			
195	200	205	
Tyr Asn Gln Asn Lys Ala Lys Ser His Phe Val Gly Leu Ser Asn Ala			
210	215	220	
Tyr His Gly Asp Thr Phe Gly Ala Met Ser Ile Ala Gly Thr Ser Pro			
225	230	235	240
Thr Thr Val Pro Phe His Asp Leu Phe Leu Pro Ser Ser Thr Ile Ala			
245	250	255	
Ala Pro Tyr Tyr Gly Lys Glu Glu Leu Ala Ile Ala Gln Ala Lys Thr			
260	265	270	
Val Phe Ser Glu Ser Asn Ile Ala Ala Phe Ile Tyr Glu Pro Leu Leu			
275	280	285	
Gln Gly Ala Gly Gly Met Leu Met Tyr Asn Pro Glu Gly Leu Lys Glu			
290	295	300	
Ile Leu Lys Leu Ala Lys His Tyr Gly Val Leu Cys Ile Ala Asp Glu			
305	310	315	320
Ile Leu Thr Gly Phe Gly Arg Thr Gly Pro Leu Phe Ala Ser Glu Phe			
325	330	335	
Thr Asp Ile Pro Pro Asp Ile Ile Cys Leu Ser Lys Gly Leu Thr Gly			
340	345	350	
Gly Tyr Leu Pro Leu Ala Leu Thr Val Thr Thr Lys Glu Ile His Asp			
355	360	365	
Ala Phe Val Ser Gln Asp Arg Met Lys Ala Leu Leu His Gly His Thr			
370	375	380	
Phe Thr Gly Asn Pro Leu Gly Cys Ser Ala Ala Leu Ala Ser Leu Asp			
385	390	395	400
Leu Thr Leu Ser Pro Glu Cys Leu Gln Gln Arg Gln Met Ile Glu Arg			
405	410	415	
Cys His Gln Glu Phe Gln Glu Ala His Gly Ser Leu Trp Gln Arg Cys			
420	425	430	
Glu Val Leu Gly Thr Val Leu Ala Leu Asp Tyr Pro Ala Glu Ala Thr			
435	440	445	
Gly Tyr Phe Ser Gln Tyr Arg Asp His Leu Asn Arg Phe Phe Leu Glu			
450	455	460	
Arg Gly Val Leu Leu Arg Pro Leu Gly Asn Thr Leu Tyr Val Leu Pro			
465	470	475	480
Pro Tyr Cys Ile Gln Glu Asp Leu Arg Ile Ile Tyr Ser His Leu			
485	490	495	
Gln Asp Ala Leu Cys Leu Gln Pro Gln			
500	505		

&lt;210&gt;1118

&lt;211&gt;219

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1118

Met Gln Arg Ile Ile Ile Val Gly Ile Asp Thr Gly Val Gly Lys Thr			
1	5	10	15
Ile Val Ser Ala Ile Leu Ala Arg Ala Leu Asn Ala Glu Tyr Trp Lys			
20	25	30	
Pro Ile Gln Ala Gly Asn Leu Glu Asn Ser Asp Ser Asn Ile Val His			
35	40	45	
Glu Leu Ser Gly Ala Tyr Cys His Pro Glu Ala Tyr Arg Leu His Lys			
50	55	60	
Pro Leu Ser Pro His Lys Ala Ala Gln Ile Asp Asn Val Ser Ile Glu			
65	70	75	80
Glu Ser His Ile Cys Ala Pro Lys Thr Thr Ser Asn Leu Ile Ile Glu			
85	90	95	
Thr Ser Gly Gly Phe Leu Ser Pro Cys Thr Ser Lys Arg Leu Gln Gly			
100	105	110	
Asp Val Phe Ser Ser Trp Ser Cys Ser Trp Ile Leu Val Ser Gln Ala			
115	120	125	
Tyr Leu Gly Ser Ile Asn His Thr Cys Leu Thr Val Glu Ala Met Arg			
130	135	140	

Ser Arg Asn Leu Asn Ile Leu Gly Met Val Val Asn Gly Tyr Pro Glu  
 145 150 155 160  
 Asp Glu Glu His Trp Leu Thr Gln Glu Ile Lys Leu Pro Ile Ile Gly  
 165 170 175  
 Thr Leu Ala Lys Glu Lys Glu Ile Thr Lys Thr Ile Ile Ser Cys Tyr  
 180 185 190  
 Ala Glu Gln Trp Lys Glu Val Trp Thr Ser Asn His Gln Gly Ile Gln  
 195 200 205  
 Gly Val Ser Gly Thr Pro Ser Leu Asn Leu His  
 210 215  
 <210>1119  
 <211>383  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1119  
 Pro Met Leu Cys Gln Gln Phe Leu Ile Glu Ala Leu Ala Arg Arg Lys  
 1 5 10 15  
 Ser Lys His Thr Tyr Arg Ser Leu Ser Leu Asn Ser His Leu Ile Asp  
 20 25 30  
 Phe Thr Ser Asn Asp Tyr Leu Gly Phe Ala Ser Ser Pro Glu Leu Arg  
 35 40 45  
 Lys Glu Tyr Ile Thr Lys Leu His Ala Ile Glu Ser Leu Gly Ala Thr  
 50 55 60  
 Gly Ser Arg Leu Leu Thr Gly His Ser Gln Leu Cys Gln Arg Ile Glu  
 65 70 75 80  
 Glu Gln Leu Ala Ala Tyr His Asn Phe Glu Ser Cys Leu Ile Phe Asn  
 85 90 95  
 Thr Gly Tyr Thr Ala Asn Leu Gly Leu Leu Tyr Ala Leu Ala Thr Asp  
 100 105 110  
 Gln Asp Arg Ile Leu His Asp Leu Tyr Ile His Ala Ser Ile Tyr Asp  
 115 120 125  
 Gly Ile Arg Leu Ser Lys Ala Gln Ser Phe Pro Phe Asn His Asn Asp  
 130 135 140  
 Leu Asn His Leu Glu Lys Arg Leu Ala Ser Ser His Leu Gly Arg Thr  
 145 150 155 160  
 Phe Val Cys Val Glu Ser Val Tyr Ser Leu His Gly Ser Val Ala Pro  
 165 170 175  
 Leu Gln Ala Ile Ser Glu Leu Cys Glu Arg Tyr Ser Ala Tyr Leu Ile  
 180 185 190  
 Val Asp Glu Ala His Ala Val Gly Val Phe Gly Asp Gln Gly Glu Gly  
 195 200 205  
 Leu Val Ser Ala Leu Gly Leu Gln Asp Lys Val Leu Ala Thr Val Tyr  
 210 215 220  
 Thr Phe Gly Lys Ala Leu Gly Thr His Gly Ala Ala Ile Ala Gly Ser  
 225 230 235 240  
 Ser Ile Leu Lys Asp Tyr Leu Ile Asn Phe Cys Arg Pro Phe Ile Tyr  
 245 250 255  
 Thr Thr Ala Gln Pro Pro His Ala Leu Thr Ala Ile Glu Leu Ala Tyr  
 260 265 270  
 Glu His Asn Gln Arg Ala Phe Asn Gln Arg Glu His Leu Ser Ala Leu  
 275 280 285  
 Ile His His Phe Arg Glu Lys Ala Gln Asn Leu Gly Leu Gln Leu Met  
 290 295 300  
 Lys Asp Asn Thr Thr Pro Ile Gln Ser Ile Cys Val Ser Gly Ser  
 305 310 315 320  
 His Arg Ala Arg Gln Ala Ala Leu Gln Ile Gln Asn Ser Gly Tyr Asp  
 325 330 335  
 Val Arg Pro Ile Val Ser Pro Thr Val Lys Gln Arg Glu Glu Leu Leu  
 340 345 350  
 Arg Ile Cys Leu His Ala Phe Asn Thr Lys Asn Glu Ile Asp His Leu  
 355 360 365  
 Leu His Thr Leu Glu Gln Ile Phe Leu Cys Asn Val Ser Ser Leu  
 370 375 380  
 <210>1120

<211>334  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1120

Ala Lys His Met Arg Glu Glu Thr Val Ser Trp Ser Leu Glu Asp Ile  
1 5 10 15  
Arg Glu Ile Tyr His Thr Pro Val Phe Glu Leu Ile His Lys Ala Asn  
20 25 30  
Ala Ile Leu Arg Ser Asn Phe Leu His Ser Glu Leu Gln Thr Cys Tyr  
35 40 45  
Leu Ile Ser Ile Lys Thr Gly Gly Cys Val Glu Asp Cys Ala Tyr Cys  
50 55 60  
Ala Gln Ser Ser Arg Tyr His Thr His Val Thr Pro Glu Pro Met Met  
65 70 75 80  
Lys Ile Val Asp Val Val Glu Arg Ala Lys Arg Ala Val Glu Leu Gly  
85 90 95  
Ala Thr Arg Val Cys Leu Gly Ala Ala Trp Arg Asn Ala Lys Asp Asp  
100 105 110  
Arg Tyr Phe Asp Arg Val Leu Ala Met Val Lys Ser Ile Thr Asp Leu  
115 120 125  
Gly Ala Glu Val Cys Cys Ala Leu Gly Met Leu Ser Glu Glu Gln Ala  
130 135 140  
Lys Lys Leu Tyr Asp Ala Gly Leu Tyr Ala Tyr Asn His Asn Leu Asp  
145 150 155 160  
Ser Ser Pro Glu Phe Tyr Glu Thr Ile Ile Thr Thr Arg Ser Tyr Glu  
165 170 175  
Asp Arg Leu Asn Thr Leu Asp Val Val Asn Lys Ser Gly Ile Ser Thr  
180 185 190  
Cys Cys Gly Gly Ile Val Gly Met Gly Glu Ser Glu Glu Asp Arg Ile  
195 200 205  
Lys Leu Leu His Val Leu Ala Thr Arg Asp His Ile Pro Glu Ser Val  
210 215 220  
Pro Val Asn Leu Leu Trp Pro Ile Asp Gly Thr Pro Leu Gln Asp Gln  
225 230 235 240  
Pro Pro Ile Ser Phe Trp Glu Val Leu Arg Thr Ile Ala Thr Ala Arg  
245 250 255  
Val Val Phe Pro Arg Ser Met Val Arg Leu Ala Ala Gly Arg Ala Phe  
260 265 270  
Leu Thr Val Glu Gln Gln Thr Leu Cys Phe Leu Ala Gly Ala Asn Ser  
275 280 285  
Ile Phe Tyr Gly Asp Lys Leu Leu Thr Val Glu Asn Asn Asp Ile Asp  
290 295 300  
Glu Asp Ala Glu Met Ile Lys Leu Leu Gly Leu Ile Pro Arg Pro Ser  
305 310 315 320  
Phe Gly Ile Glu Arg Gly Asn Pro Cys Tyr Ala Asn Asn Ser  
325 330

&lt;210&gt;1121

&lt;211&gt;259

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1121

Ser Glu Phe Met Val Ser Thr Pro Phe Leu Thr Val Phe Ser Met Glu  
1 5 10 15  
Lys Leu Leu Ser Lys Ile Phe Leu Asp Tyr Leu Glu Ala Phe Gly Leu  
20 25 30  
Leu Ser Asp Phe Leu Asp His Gln Ala Val Ile Lys Phe Phe Glu Leu  
35 40 45  
Glu Thr His Phe Ser Tyr Tyr Pro Val Ser Gly Phe Val Ala Pro His  
50 55 60  
Gln Tyr Leu Ser Leu Leu Gln Asp Arg Tyr Phe Pro Ile Ala Ser Val  
65 70 75 80  
Met Arg Thr Leu Asp Lys Asp Asn Phe Ser Leu Thr Pro Asp Leu Ile  
85 90 95  
His Asp Leu Leu Gly His Val Pro Trp Leu Leu His Pro Ser Phe Ser

100	105	110
Glu Phe Phe Ile Asn Met Gly Arg Leu Phe Thr Lys Val Ile Glu Lys		
115	120	125
Val Gln Ala Leu Pro Ser Lys Lys Gln Arg Ile Gln Thr Leu Gln Ser		
130	135	140
Asn Leu Ile Ala Ile Val Arg Cys Phe Trp Phe Thr Val Glu Ser Gly		
145	150	155
Leu Ile Glu Asn His Glu Gly Arg Lys Ala Tyr Gly Ala Val Leu Ile		
165	170	175
Ser Ser Pro Gln Glu Leu Gly His Ala Phe Ile Asp Asn Val Arg Val		
180	185	190
Leu Pro Leu Glu Leu Asp Gln Ile Ile Arg Leu Pro Phe Asn Thr Ser		
195	200	205
Thr Pro Gln Glu Thr Leu Phe Ser Ile Arg His Phe Asp Glu Leu Val		
210	215	220
Glu Leu Thr Ser Lys Leu Glu Trp Met Leu Asp Gln Gly Leu Leu Glu		
225	230	235
Ser Ile Pro Leu Tyr Asn Gln Glu Lys Tyr Leu Ser Gly Phe Glu Val		
245	250	255
Leu Cys Gln		

&lt;210&gt;1122

&lt;211&gt;264

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1122

Met Gly Ser Ser Met His Val Gly Val Ile Gly Cys Ser Gly Arg Thr		
1	5	10
Gly Lys Val Ile Val Ser Ala Leu Glu Gln Ser Ser Glu Tyr Thr Leu		
20	25	30
Gly Pro Gly Phe Ser Arg Ser Ser Ala Leu Thr Leu Phe Gln Val Ile		
35	40	45
Ala His Asn Asp Val Leu Val Asp Phe Ser His Pro Leu Leu Thr Lys		
50	55	60
Glu Val Val Ala His Leu Leu Ile Ser Pro Lys Pro Leu Ile Ile Gly		
65	70	75
80		
Thr Thr Gly Phe Pro Gly Lys Cys Lys Glu Ala His Asp Ser Leu Glu		
85	90	95
Glu Leu Thr His Ile Val Pro Val Val Cys Pro Asn Ala Ser Leu		
100	105	110
Gly Ala Tyr Ile His Lys Arg Leu Val Met Leu Leu Ser Gln Leu Cys		
115	120	125
Asn Pro Gln Phe Asp Ile Arg Ile Arg Glu Thr His His Arg Tyr Lys		
130	135	140
Lys Asp Ser Leu Ser Gly Thr Ala Gln Asp Leu Leu Asp Thr Ile Gln		
145	150	155
160		
Gln Val Lys Gln Glu Asp Trp Gly Glu Glu Tyr Glu Val Gly Gln Arg		
165	170	175
Asp Ser Ser Lys Lys Thr Ile Glu Val Gln Ser Ser Arg Val Gly Asp		
180	185	190
Ile Pro Gly Glu His Glu Val Ala Phe Ile Ser Ser Gly Glu Gln Ile		
195	200	205
Leu Val Arg His Thr Val Phe Ser Arg Asn Val Phe Gly Arg Gly Ile		
210	215	220
Leu Ser Ile Leu Asp Trp Leu Lys Thr Leu Asn Pro Gln Pro Gly Leu		
225	230	235
240		
Tyr Ser Leu Gly Asp Thr Leu Glu Leu Val Leu Arg Asn Glu His Cys		
245	250	255
Leu Leu Lys Lys Thr Thr Asp His		
260		

&lt;210&gt;1123

&lt;211&gt;295

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

<400>1123

Ile	Trp	Ala	Ile	Val	Trp	Arg	Cys	Leu	Tyr	Leu	Ala	Gly	Ala	Ile	Gly
1				5				10						15	
Pro	Met	Pro	Glu	Met	Val	Arg	Asp	Leu	Pro	Ile	Arg	Lys	Ile	Glu	Glu
				20				25						30	
Val	Gln	Ser	Asp	Ile	Val	Val	Ser	Phe	Leu	Pro	Ser	Ser	Ala	Glu	Ser
				35				40					45		
Met	Glu	Ala	Tyr	Cys	Leu	Ser	Gln	Gly	Lys	Val	Val	Phe	Ser	Asn	Ala
				50				55				60			
Ser	Thr	Tyr	Arg	Met	His	Ser	Ser	Val	Pro	Ile	Ile	Ile	Pro	Glu	Val
				65				70				75		80	
Asn	Ser	Asp	His	Phe	Gln	Leu	Leu	Glu	Gln	Pro	Tyr	Pro	Gly	Lys	
				85				90				95			
Ile	Ile	Thr	Ser	Pro	Asn	Cys	Cys	Val	Ser	Gly	Ile	Thr	Leu	Ala	Leu
				100				105				110			
Ala	Pro	Leu	Arg	Lys	Phe	Ser	Leu	Asp	His	Val	His	Ile	Val	Thr	Leu
				115				120				125			
Gln	Ser	Ala	Ser	Gly	Ala	Gly	Tyr	Pro	Gly	Val	Pro	Ser	Leu	Asp	Leu
				130				135				140			
Leu	Ala	Asn	Thr	Val	Pro	His	Ile	Val	Gly	Glu	Glu	Glu	Lys	Ile	Leu
				145				150				155		160	
Arg	Glu	Thr	Val	Lys	Ile	Leu	Gly	Ser	Ser	Lys	Gln	Pro	Leu	Pro	Cys
				165				170				175			
Lys	Leu	Ser	Val	Thr	Val	His	Arg	Val	Pro	Val	Ala	Tyr	Gly	His	Thr
				180				185				190			
Leu	Ser	Leu	His	Val	Thr	Phe	Ser	Lys	Asp	Val	Asp	Leu	Asp	Glu	Ile
				195				200				205			
Leu	Tyr	Ser	Tyr	Gln	Glu	Lys	Asn	Lys	Glu	Phe	Pro	Asn	Thr	Tyr	Gln
				210				215				220			
Leu	Tyr	Asp	Asn	Pro	Trp	Ser	Pro	Gln	Ala	Arg	Lys	His	Leu	Ser	His
				225				230				235		240	
Asp	Asp	Met	Arg	Val	His	Leu	Gly	Pro	Ile	Thr	Tyr	Gly	Gly	Asp	Phe
				245				250				255			
Arg	Thr	Ile	Lys	Met	Asn	Val	Leu	Ile	His	Asn	Leu	Val	Arg	Gly	Ala
				260				265				270			
Ala	Gly	Thr	Leu	Leu	Ala	Ser	Met	Glu	Asn	Tyr	Phe	Phe	Asp	Tyr	Leu
				275				280				285			
Lys	Arg	Glu	Met	Cys	Leu	Arg									
				290				295							

&lt;210&gt;1124

&lt;211&gt;441

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1124

Asn	Val	Ser	Lys	Ile	Val	Tyr	Lys	Phe	Gly	Gly	Thr	Ser	Leu	Ala	Thr
1				5				10				15			
Ala	Glu	Asn	Ile	Cys	Leu	Val	Cys	Asp	Ile	Ile	Cys	Lys	Asp	Lys	Pro
				20				25				30			
Ser	Phe	Val	Val	Val	Ser	Ala	Ile	Ala	Gly	Val	Thr	Asp	Leu	Leu	Val
				35				40				45			
Asp	Phe	Cys	Ser	Ser	Ser	Leu	Arg	Glu	Glu	Glu	Val	Leu	Arg	Lys	
				50				55				60			
Ile	Glu	Gly	Lys	His	Glu	Glu	Ile	Val	Lys	Asn	Leu	Ala	Ile	Pro	Phe
				65				70				75		80	
Pro	Val	Ser	Thr	Trp	Thr	Ser	Arg	Leu	Leu	Pro	Tyr	Leu	Gln	His	Leu
				85				90				95			
Glu	Ile	Ser	Asp	Leu	Asp	Phe	Ala	Arg	Ile	Leu	Ser	Leu	Gly	Glu	Asp
				100				105				110			
Ile	Ser	Ala	Ser	Leu	Val	Arg	Ala	Val	Cys	Ser	Thr	Arg	Gly	Trp	Asp
				115				120				125			
Leu	Gly	Phe	Leu	Glu	Ala	Arg	Ser	Val	Ile	Leu	Thr	Asp	Asp	Ser	Tyr
				130				135				140			
Arg	Arg	Ala	Ser	Pro	Asn	Leu	Asp	Leu	Met	Lys	Ala	His	Trp	His	Gln
				145				150				155		160	

Leu Glu Leu Asn Gln Pro Ser Tyr Ile Ile Gln Gly Phe Ile Gly Ser  
           165                 170                 175  
 Asn Gly Leu Gly Glu Thr Val Leu Leu Gly Arg Gly Ser Asp Tyr  
           180                 185                 190  
 Ser Ala Thr Leu Ile Ala Glu Leu Ala Arg Ala Thr Glu Val Arg Ile  
           195                 200                 205  
 Tyr Thr Asp Val Asn Gly Ile Tyr Thr Met Asp Pro Lys Val Ile Ser  
           210                 215                 220  
 Asp Ala Gln Arg Ile Pro Glu Leu Ser Phe Glu Glu Met Gln Asn Leu  
           225                 230                 235                 240  
 Ala Ser Phe Gly Ala Lys Val Leu Tyr Pro Pro Met Leu Phe Pro Cys  
           245                 250                 255  
 Met Arg Ala Gly Ile Pro Ile Phe Val Thr Ser Thr Phe Asp Pro Glu  
           260                 265                 270  
 Lys Gly Gly Thr Trp Val Tyr Ala Val Asp Lys Ser Val Ser Tyr Glu  
           275                 280                 285  
 Pro Arg Ile Lys Ala Leu Ser Leu Ser Gln Tyr Gln Ser Phe Cys Ser  
           290                 295                 300  
 Val Asp Tyr Thr Val Leu Gly Cys Gly Leu Glu Glu Ile Leu Gly  
           305                 310                 315                 320  
 Ile Leu Glu Ser His Gly Ile Asp Pro Glu Leu Met Ile Ala Gln Asn  
           325                 330                 335  
 Asn Val Val Gly Phe Val Met Asp Asp Asp Ile Ile Ser Gln Glu Ala  
           340                 345                 350  
 Gln Glu His Leu Val Asp Val Leu Ser Leu Ser Ser Val Thr Arg Leu  
           355                 360                 365  
 His His Ser Val Ala Leu Ile Thr Met Ile Gly Asp Asn Leu Ser Ser  
           370                 375                 380  
 Pro Lys Val Val Ser Thr Ile Thr Glu Lys Leu Arg Gly Phe Gln Gly  
           385                 390                 395                 400  
 Pro Val Phe Cys Phe Cys Gln Ser Ser Met Ala Leu Ser Phe Val Val  
           405                 410                 415  
 Ala Ser Glu Leu Ala Glu Gly Ile Ile Glu Glu Leu His Asn Asp Tyr  
           420                 425                 430  
 Val Lys Gln Lys Ala Ile Val Ala Thr  
           435                 440

&lt;210&gt;1125

&lt;211&gt;271

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1125

Lys Ser Tyr Ser Arg His Val Gly Arg Ile Met His Leu Leu Thr Ala  
     1                     5                 10                 15  
 Thr Val Thr Pro Phe Phe Pro Asn Gly Thr Ile Asp Phe Ala Ser Leu  
     20                 25                 30  
 Glu Arg Leu Leu Ser Phe Gln Asp Ala Val Gly Asn Gly Val Val Leu  
     35                 40                 45  
 Leu Gly Ser Thr Gly Glu Gly Leu Ser Leu Thr Lys Lys Glu Lys Gln  
     50                 55                 60  
 Ala Leu Ile Cys Phe Ala Cys Asp Leu Gln Leu Lys Val Pro Leu Phe  
     65                 70                 75                 80  
 Val Gly Thr Ser Gly Thr Leu Leu Glu Glu Val Leu Asp Trp Ile His  
     85                 90                 95  
 Phe Cys Asn Asp Leu Pro Ile Ser Gly Phe Leu Met Thr Thr Pro Ile  
     100                105                110  
 Tyr Thr Lys Pro Lys Leu Cys Gly Gln Ile Leu Trp Phe Glu Ala Val  
     115                120                125  
 Leu Asn Ala Ala Lys His Pro Ala Ile Leu Tyr Asn Ile Pro Ser Arg  
     130                135                140  
 Ala Ala Thr Pro Leu Tyr Leu Asp Thr Val Lys Ala Leu Ala His His  
     145                150                155                 160  
 Pro Gln Phe Leu Gly Ile Lys Asp Ser Gly Gly Ser Val Glu Glu Phe  
     165                170                175  
 Gln Ser Tyr Lys Ser Ile Ala Pro His Ile Gln Leu Tyr Cys Gly Asp

180	185	190
Asp Val Phe Trp Ser Glu Met Ala Ala Cys Gly Ala His	Gly Leu Ile	
195	200	205
Ser Val Leu Ser Asn Ala Trp Pro Glu Glu Ala Arg	Glu Tyr Val Leu	
210	215	220
Asn Pro Gln Glu Gln Asp Tyr Arg Ser Leu Trp Met Glu Thr Cys Arg		
225	230	235
Trp Val Tyr Thr Thr Asn Pro Ile Gly Ile Lys Ala Ile	Leu Ala	
245	250	255
Tyr Lys Lys Ala Ile Thr His Ala His Cys Ala Cys Pro Cys Leu		
260	265	270

&lt;210&gt;1126

&lt;211&gt;256

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1126

Phe Phe Ile Gln Lys Met Lys Tyr Asn Ser Arg Glu Lys Ile Lys Ser		
1	5	10
Ala Leu Arg Ile Cys Ser Ser Tyr Cys Ile Thr Val Phe Arg Asn Asn		
20	25	30
Phe Ser Leu Ser Cys Tyr Asp Lys Ile Phe Tyr Ser Leu Ser Cys Tyr		
35	40	45
Val Phe Asn Gly Pro Asn Ser Ile Gly Arg Cys Arg Ser Phe Cys Phe		
50	55	60
Phe Arg Gly Lys Lys Thr Glu Val Glu Thr Lys Glu Val Lys Ile Lys		
65	70	75
Asp Glu Ile Arg Pro Ser Leu Glu Gly Asn Asp Pro Val Lys Val Ala		
85	90	95
Glu Ser Phe Pro Lys Arg Arg Ala Ala Leu Glu Ser Leu Ser Ser Gln		
100	105	110
Ser Ser Ile Gly Asn Leu Cys Ala Ile Ser Asn Phe Leu Asp Ser Gln		
115	120	125
Met Leu Ser Arg Asn Phe Ser Lys Glu Ile Trp Gly Ser Thr Ile Phe		
130	135	140
Thr Arg Ser Lys Ser Thr Cys Asp Ala Glu Gly Ser Glu Pro Phe Arg		
145	150	155
Tyr Thr Ala Cys Gly Tyr Leu Ala Gly Leu Arg Ser Lys Leu Ala Gly		
165	170	175
Ser Tyr Glu Leu Gly Val Thr Ala Gly Leu Leu Gln Gly Arg Leu Lys		
180	185	190
Asp Val Ser Asp Ser His Arg Thr Arg Ala Thr Ser Ser Ile Leu Ser		
195	200	205
Val His Gly Ser Met Val Thr Arg Pro Leu Ser Cys Thr Lys Tyr Ile		
210	215	220
Val Gly Lys Ala Arg Pro Leu Leu Phe Phe Phe Arg Leu Thr Ser Asp		
225	230	235
Val Arg Arg Asp Leu Lys Lys Phe Arg Leu Glu Phe Cys Lys Asp		
245	250	255

&lt;210&gt;1127

&lt;211&gt;119

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1127

His Ile Leu Phe Tyr Ser Lys Phe Thr Tyr Arg Thr Pro Leu Arg Val		
1	5	10
Thr Ser Pro Ser Gly Arg His Asp Phe Asn Ile Asp Met His Val Ala		
20	25	30
Pro Lys Ile Gly Ala Val Leu Ser His Gly Thr Arg Glu Ala Lys Glu		
35	40	45
Ile Pro Gly Ser Ser Lys Asp Tyr Ala Phe Phe Ser Leu Thr Ala Arg		
50	55	60
Glu Ser Leu Met Ile Ser Glu Lys Leu Ala Met Thr Phe Gln Val Ser		
65	70	75
Glu Val Ile Gln Asn Cys Tyr Ser Gln Cys Thr Lys Val Thr Lys Thr		80

85	90	95
Asn Leu Lys Glu Gln Tyr Arg His	Leu Ser His Asn Thr Gly Phe Glu	
100	105	110
Leu Ser Val Lys Ser Ala Phe		
115		
<210>1128		
<211>810		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1128		
Cys Lys Tyr Phe Tyr Leu Arg Ser Tyr Pro Pro Pro Gln His Ser Val		
1               5               10               15		
Gly Ser Ile Ser Ser Pro Ser Lys Leu Arg Val Leu Ala Ile Thr Phe		
20               25               30		
Leu Val Phe Gly Met Leu Leu Leu Ile Ser Gly Ala Leu Phe Leu Thr		
35               40               45		
Leu Gly Ile Pro Gly Leu Ser Ala Ala Ile Ser Phe Gly Leu Gly Ile		
50               55               60		
Gly Leu Ser Ala Leu Gly Gly Val Leu Met Ile Ser Gly Leu Leu Cys		
65               70               75               80		
Leu Leu Val Lys Arg Glu Ile Pro Thr Val Arg Pro Glu Glu Ile Pro		
85               90               95		
Glu Gly Val Ser Leu Ala Pro Ser Glu Glu Pro Ala Leu Gln Ala Ala		
100               105               110		
Gln Lys Thr Leu Ala Gln Leu Pro Lys Glu Leu Asp Gln Leu Asp Thr		
115               120               125		
Asp Ile Gln Glu Val Phe Ala Cys Leu Arg Lys Leu Lys Asp Ser Lys		
130               135               140		
Tyr Glu Ser Arg Ser Phe Leu Asn Asp Ala Lys Lys Glu Leu Arg Val		
145               150               155               160		
Phe Asp Phe Val Val Glu Asp Thr Leu Ser Glu Ile Phe Glu Leu Arg		
165               170               175		
Gln Ile Val Ala Gln Glu Gly Trp Asp Leu Asn Phe Leu Ile Asn Gly		
180               185               190		
Gly Arg Ser Leu Met Met Thr Ala Glu Ser Glu Ser Leu Asp Leu Phe		
195               200               205		
His Val Ser Lys Arg Leu Gly Tyr Leu Pro Ser Gly Asp Val Arg Gly		
210               215               220		
Glu Gly Leu Lys Lys Ser Ala Lys Glu Ile Val Ala Arg Leu Met Ser		
225               230               235               240		
Leu His Cys Glu Ile His Lys Val Ala Val Ala Phe Asp Arg Asn Ser		
245               250               255		
Tyr Ala Met Ala Glu Lys Ala Phe Ala Lys Ala Leu Gly Ala Leu Glu		
260               265               270		
Glu Ser Val Tyr Arg Ser Leu Thr Gln Ser Tyr Arg Asp Lys Phe Leu		
275               280               285		
Glu Ser Glu Arg Ala Lys Ile Pro Trp Asn Gly His Ile Thr Trp Leu		
290               295               300		
Arg Asp Asp Ala Lys Ser Gly Cys Ala Glu Lys Lys Leu Arg Asp Ala		
305               310               315               320		
Glu Glu Arg Trp Lys Lys Phe Arg Lys Ala Val Phe Trp Val Glu Glu		
325               330               335		
Asp Gly Gly Phe Asp Ile Asn Asn Leu Leu Gly Asp Trp Gly Thr Val		
340               345               350		
Leu Asp Pro Tyr Arg Gln Glu Arg Met Asp Glu Ile Thr Phe His Glu		
355               360               365		
Leu Tyr Glu Lys Thr Thr Phe Leu Lys Arg Leu His Arg Lys Cys Ala		
370               375               380		
Leu Ala Lys Thr Thr Phe Glu Lys Xaa Arg Ser Lys Lys Asn Leu Gln		
385               390               395               400		
Ala Val Xaa Glu Ala Asn Ala Arg Arg Leu Lys Tyr Val Arg Asp Trp		
405               410               415		
Tyr Asp Gln Xaa Phe Gln Lys Ala Gly Glu Arg Leu Glu Lys Leu His		
420               425               430		

Ala Leu Tyr Pro Val Ser Val Ser Ile Arg Glu Ala Lys Ile Gln  
           435               440               445  
 Glu Thr Arg Ser Asn Leu Xaa Lys Ala Tyr Glu Ala Ile Glu Xaa Asn  
           450               455               460  
 Tyr Arg Cys Cys Val Arg Glu Gln Glu Asp Tyr Trp Lys Glu Glu Glu  
           465               470               475               480  
 Lys Arg Glu Ala Xaa Phe Arg Glu Arg Gly Asn Xaa Ile Leu Ser Pro  
           485               490               495  
 Glu Glu Leu Glu Xaa Ser Leu Glu Gln Phe Asp His Gly Leu Lys Asn  
           500               505               510  
 Phe Ser Glu Lys Leu Met Glu Leu Glu Gly His Ile Leu Lys Leu Gln  
           515               520               525  
 Lys Glu Ala Thr Ala Glu Val Glu Asn Lys Ile Leu Ser Asp Ala Glu  
           530               535               540  
 Ser Arg Leu Glu Ile Val Phe Glu Asp Val Lys Glu Met Pro Cys Arg  
           545               550               555               560  
 Ile Glu Glu Ile Glu Lys Thr Leu Arg Met Ala Xaa Leu Pro Leu Leu  
           565               570               575  
 Pro Thr Lys Lys Ala Phe Glu Lys Ala Cys Ser Gln Tyr Asn Ser Cys  
           580               585               590  
 Ala Glu Met Leu Glu Lys Val Lys Pro Tyr Cys Lys Glu Ser Leu Ala  
           595               600               605  
 Tyr Val Thr Ser Lys Glu Arg Leu Val Ser Leu Asp Glu Asp Leu Arg  
           610               615               620  
 Arg Ala Tyr Thr Glu Cys Gln Lys Arg Phe Gln Gly Asp Ser Gly Leu  
           625               630               635               640  
 Glu Ser Glu Val Arg Ala Cys Arg Glu Gln Leu Arg Glu Arg Ile Gln  
           645               650               655  
 Glu Phe Glu Thr Gln Gly Leu Asp Leu Val Glu Lys Glu Leu Leu Cys  
           660               665               670  
 Val Ser Ser Arg Leu Arg Asn Thr Glu Cys Asp Cys Val Ser Gly Val  
           675               680               685  
 Lys Lys Glu Ala Pro Pro Gly Lys Lys Phe Tyr Ala Gln Tyr Tyr Asp  
           690               695               700  
 Glu Ile Tyr Arg Val Arg Val Gln Ser Arg Trp Met Thr Met Ser Glu  
           705               710               715               720  
 Arg Leu Arg Glu Gly Val Gln Ala Cys Asn Lys Met Leu Lys Ala Gly  
           725               730               735  
 Leu Ser Glu Glu Asp Lys Val Leu Lys Glu Glu Tyr Trp Leu Tyr  
           740               745               750  
 Arg Glu Glu Arg Lys Asn Lys Glu Lys Arg Leu Val Gly Thr Lys Ile  
           755               760               765  
 Val Ala Thr Gln Gln Arg Val Ala Ala Phe Glu Ser Ile Glu Val Pro  
           770               775               780  
 Glu Ile Pro Glu Ala Pro Glu Glu Lys Pro Ser Leu Leu Asp Lys Ala  
           785               790               795               800  
 Arg Ser Leu Phe Thr Arg Glu Asp His Thr  
           805               810

&lt;210&gt;1129

&lt;211&gt;132

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1129

Val Ala Cys Arg Ala Gly Ser Ser Glu Gly Ala Thr Glu Thr Pro Ser  
     1               5               10               15  
 Gly Ile Ser Ser Gly Arg Thr Val Gly Thr Ser Arg Phe Ala Lys Arg  
     20               25               30  
 His Arg Ser Pro Glu Thr Thr Ser Thr Pro Pro Asn Ala Glu Arg Pro  
     35               40               45  
 Met Pro Asn Pro Lys Glu Ile Ala Ala Leu Asn Pro Glu Ile Pro Asn  
     50               55               60  
 Val Arg Lys Arg Ala Pro Glu Ile Lys Lys Ser Thr Pro Arg Thr Lys  
     65               70               75               80  
 Lys Val Ile Ala Lys Thr Arg Asn Leu Asp Arg Gln Lys Lys Ala Pro

	85	90	95
Thr Glu Trp Ser Gly Gly Gly Gly Ser Cys Gly Asp Arg Gly Thr			
100	105	110	
Cys Ile Met Asn Leu Trp Arg His His Ala Gln Thr His Lys Leu Asn			
115	120	125	
Pro Leu Ser Tyr			
130			
<210>1130			
<211>320			
<212>PRT			
<213>Chlamydia pneumoniae			
<400>1130			
Trp Arg His Arg Phe Ile Met Gln Val Pro Leu Ser Pro Gln Leu Pro			
1	5	10	15
Pro Pro Pro Pro Asp His Ser Val Gly Ala Phe Phe Cys Leu Ser Lys			
20	25	30	
Phe Arg Val Leu Ala Ile Thr Phe Leu Val Leu Gly Val Leu Phe Leu			
35	40	45	
Ile Ser Gly Ala Leu Phe Leu Thr Leu Gly Ile Ser Gly Leu Ser Ala			
50	55	60	
Ala Ile Ser Phe Gly Leu Gly Ile Gly Leu Ser Ala Leu Gly Gly Val			
65	70	75	80
Leu Val Val Ser Gly Leu Leu Cys Leu Leu Ala Lys Arg Glu Val Pro			
85	90	95	
Thr Val Arg Pro Glu Glu Ile Pro Glu Gly Val Ser Val Ala Pro Ser			
100	105	110	
Glu Glu Pro Ala Leu Gln Ala Thr Gln Lys Thr Leu Ala Gln Leu Pro			
115	120	125	
Lys Glu Leu Asp Gln Leu Asp Arg Tyr Ile Gln Glu Val Val Ser Cys			
130	135	140	
Leu Gly Lys Leu Lys Asp Leu Arg Cys Glu Asp Gln Gly Leu Leu Lys			
145	150	155	160
Asp Ala Lys Glu Lys Leu Gln Val Phe Asp Phe Val Trp Lys Asp Met			
165	170	175	
Met Thr Glu Phe Val Glu Leu Gln Ile Met Asp Gln Glu Gly Trp			
180	185	190	
Tyr Leu Lys Cys Leu Ile Gln Glu Met Arg Asp Ile Gly Ser Thr Leu			
195	200	205	
Phe Met Ser Gln Val Ser Leu Phe Lys Leu Trp Glu Trp Leu Gly Tyr			
210	215	220	
Leu Pro Ser Gly Asp Val Arg Gly Glu Arg Leu Lys Lys Ser Ala Arg			
225	230	235	240
Glu Val Val Asp Arg Phe Met Arg Arg Ile Cys Asp Thr Arg Lys Val			
245	250	255	
Ala Met Thr Phe Asp Arg Asn Ala Tyr Gly Val Ala Lys Thr Ala Phe			
260	265	270	
Glu Lys Ala Phe Gly Ala Leu Glu Thr Cys Val Tyr Lys Ser Met Thr			
275	280	285	
Glu Ser Tyr Arg Glu Ala Phe Cys Glu Tyr Lys Lys Thr Lys Ile Leu			
290	295	300	
Arg Asp Glu Glu Lys Ile Leu Arg Ile Cys Tyr Leu Glu Leu Arg Arg			
305	310	315	320
<210>1131			
<211>249			
<212>PRT			
<213>Chlamydia pneumoniae			
<400>1131			
Gly Glu Asp Ile Lys Asp Met Leu Ser Arg Val Glu Glu Ile Glu Met			
1	5	10	15
Met Leu Arg Val Ile Glu Leu Pro Leu Leu Pro Ile Lys Gln Ala Leu			
20	25	30	
Glu Lys Ala Phe Val Gln Tyr Asn Ser Tyr Lys Ala Lys Leu Thr Lys			
35	40	45	
Val Glu Pro Cys Phe Arg Glu Ser Pro Ala Tyr Ile Thr Ser Glu Glu			

50	55	60
Arg Leu Xaa Ser	Leu Asp Gln Thr	Leu Glu Arg Ala Tyr Lys Glu Tyr
65	70	75 80
Gln Lys Arg Phe	Gln Glu Pro Ser Arg	Leu Glu Ser Glu Val Ser Gly
	85	90 95
Cys Arg Glu His	Leu Arg Glu Gln Val	Lys Gln Phe Glu Thr Gln Gly
	100	105 110
Leu Asp Leu Ile	Lys Glu Glu Leu Ile	Phe Val Ser Asp Val Leu Phe
115	120	125
Arg Lys Met Val	Ser Cys Leu Val Ser	Thr Val His Val Pro Phe Met
130	135	140
Glu Phe Tyr Tyr	Glu Tyr Phe Glu Leu	His Arg Leu Arg Leu Arg Ala
145	150	155 160
Gln Trp Met Ala	Asn Ala Glu Ile	Tyr Ser Lys Val Arg Lys Ala Phe
	165	170 175
Pro Glu Met Leu	Lys Glu Thr Leu Glu	Lys Ala Lys Ala Pro Arg Glu
	180	185 190
Glu Glu Tyr Trp	Leu Leu Cys Glu Glu Arg Lys Ser	Lys Glu Lys Arg
	195	200 205
Leu Ile Leu Asn	Lys Ile Glu Ala Ala	Gln Gln Arg Val Lys Asp Leu
210	215	220
Glu Pro Pro Pro	Ile Lys Glu Thr Gly	Lys Gln Lys Arg Lys Lys Glu
225	230	235 240
Tyr Ser Phe Phe	Ile Arg Leu Lys Ser	
	245	

&lt;210&gt;1132

&lt;211&gt;679

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1132

Met Pro Glu Pro Leu Tyr	Thr Asn Lys Leu Ile	Thr Glu Lys Ser Pro
1	5	10 15
Tyr Leu Leu Leu Tyr	Ala His Thr Pro Val Asn Trp	Tyr Pro Trp Gly
	20	25 30
Ala Glu Ala Phe His	Ile Ala Ala Ile Glu Asn Lys	Pro Val Phe Leu
	35	40 45
Ser Ile Gly Cys Lys	His Ser Arg Trp Cys Gln Val	Met Leu Gln Glu
	50	55 60
Ser Tyr Thr Asn Pro	Glu Ile Ala Ala Met Leu Asn	Glu Tyr Phe Val
65	70	75 80
Asn Val Lys Val Asp	Lys Glu Glu Leu Pro	Tyr Val Ala Lys Leu Tyr
	85	90 95
Gly Asp Leu Ala Gln	Met Leu Ala Val Ser	Gly Asp His Gln Glu Thr
	100	105 110
Val Ser Trp Pro Leu	Asn Val Phe Leu Thr Pro Asp	Leu Val Pro Phe
	115	120 125
Phe Ser Val Asn Tyr	Leu Gly Asn Glu Gly	Lys Leu Gly Leu Pro Ser
130	135	140
Phe Pro Gln Ile Ile	Asp Lys Leu His Phe	Met Trp Glu Asp Ala Glu
145	150	155 160
Glu Arg Glu Ala Leu	Val Glu Gln Ala Met Arg	Phe Leu Glu Ile Ala
	165	170 175
Ser Phe Leu Glu	Gly Cys Val Arg Lys	Glu Ile Leu Asp Glu Ser Ser
	180	185 190
Leu Lys Arg Thr Val	Ala Ala Leu Tyr	Gln Asp Ile Asp Pro His Tyr
	195	200 205
Gly Gly Val Lys	Ala Phe Pro Lys Arg Leu	Pro Gly Leu Leu Leu Gln
210	215	220
Phe Phe Leu Arg	Tyr Ser Leu Glu Tyr	Gln Glu Ser Arg Gly Leu Phe
225	230	235 240
Phe Val Asp Arg	Ser Leu Ser Met Val	Ala Leu Gly Gly Val Arg Asp
	245	250 255
His Ile Gly Gly	Gly Val Tyr Ser Tyr	Thr Ile Asp Asp Lys Trp Leu
	260	265 270

Ile Pro Ala Phe Glu Ly~~r~~g Leu Ile Asp Asn Ala Leu Me a Leu  
 275 280 285  
 Asn Tyr Leu Glu Ala Trp Ala Cys Leu Gly Lys Glu Glu Tyr Arg Gly  
 290 295 300  
 Ile Gly Lys Gln Ile Leu Ser Tyr Ile Leu Ser Glu Leu Tyr Ser Pro  
 305 310 315 320  
 Glu Val Gly Ala Phe Tyr Ser Ser Glu Gln Ala Glu Asn Trp Gly Ala  
 325 330 335  
 Gly Gly Gln Asn Phe Tyr Thr Trp Ser Val Glu Glu Ile Ser Asn Ala  
 340 345 350  
 Leu Gly Glu Asp Ala Glu Ile Phe Cys Asp Tyr Tyr Gly Ile Ser Arg  
 355 360 365  
 Glu Gly Phe Phe Asn Gly Arg Asn Ile Leu His Ile Pro Val His Arg  
 370 375 380  
 Glu Ile Glu Glu Leu Ser Glu Lys Tyr His Arg Ser Ile Glu Ala Ile  
 385 390 395 400  
 Glu Asp Ile Val Asp Arg Ser Arg Asp Ile Leu Lys Gly Ile Arg Ala  
 405 410 415  
 Gln Arg Ser His Arg Ser Lys Asp Asp Leu Ser Leu Thr Phe Asn Asn  
 420 425 430  
 Gly Trp Met Ile Tyr Thr Phe Ala Tyr Ala Gly Arg Leu Leu Gly Glu  
 435 440 445  
 Val Glu Tyr Ile Glu Ile Glu Lys Lys Cys Gly Glu Phe Val Arg Asn  
 450 455 460  
 Ser Leu Tyr Lys His His Glu Leu Tyr Arg Arg Trp Arg Glu Gly Glu  
 465 470 475 480  
 Ala Lys Tyr Arg Ala Ser Leu Glu Asp Tyr Gly Ala Leu Ile Leu Gly  
 485 490 495  
 Val Leu Ala Leu Tyr Glu Ser Gly Cys Gly Ser Phe Trp Leu Ser Phe  
 500 505 510  
 Ala Glu Glu Leu Met Gln Glu Val Val Leu Ser Phe Arg Ser Glu Glu  
 515 520 525  
 Gly Gly Phe Tyr Ser Asp Asp Gly Arg Asp Ser Thr Leu Leu Ile Lys  
 530 535 540  
 Gln Ser Pro Leu Ser Asp Gly Glu Thr Ile Ser Gly Asn Ala Leu Ile  
 545 550 555 560  
 Cys Gln Cys Leu Leu Ser Leu His Leu Ile Thr Glu Lys Lys His Tyr  
 565 570 575  
 Leu Thr Tyr Ala Glu Asp Ile Leu Gln Ile Ala Gln Ala Cys Ala His  
 580 585 590  
 Thr His Lys Phe Ser Ser Leu Gly Leu Leu Ile Ala Ser Gln Asn Tyr  
 595 600 605  
 Phe Ser Arg Lys His Val Lys Val Leu Ile Pro Leu Gly Asp Gln Glu  
 610 615 620  
 Asp Arg Ser Pro Val Leu Lys Cys Leu Ser Gly Leu Phe Leu Pro Tyr  
 625 630 635 640  
 Leu Ser Leu Ile Trp Met Thr Gln Glu Asn Gln Glu His Leu Glu Thr  
 645 650 655  
 Val Leu Pro Glu Tyr Glu His Cys Leu Ile Pro Lys Arg Gly Ile Ala  
 660 665 670  
 Gln Leu Arg Gln Phe Met Phe  
 675

&lt;210&gt;1133

&lt;211&gt;365

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1133

Glu Val Met Lys Leu Tyr Gln Thr Leu Arg Gly Ile Val Leu Val Ser  
 1 5 10 15  
 Thr Gly Cys Ile Phe Leu Gly Met His Gly Gly Tyr Ala Ala Glu Val  
 20 25 30  
 Pro Val Thr Ser Ser Gly Tyr Glu Asn Leu Leu Glu Ser Lys Glu Gln  
 35 40 45  
 Asp Pro Ser Gly Leu Ala Ile His Asp Arg Ile Leu Phe Lys Val Asp

50	55	60
Glu	Glu	Asn Val Val Thr Ala Leu Asp Val Ile His Lys Leu Asn Leu
65	70	75
Leu	Phe	Tyr Asn Ser Tyr Pro His Leu Ile Asp Ser Phe Pro Ala Arg
		85 90 95
Ser	Gln	Tyr Tyr Thr Ala Met Trp Pro Val Val Leu Glu Ser Val Ile
		100 105 110
Asp	Glu	Phe Leu Met Val Ala Asp Ala Lys Ala Lys Arg Ile Ala Thr
		115 120 125
Asp	Pro	Thr Ala Val Asn Gln Glu Ile Glu Glu Met Phe Gly Arg Asp
		130 135 140
Leu	Ser	Pro Leu Tyr Ala His Phe Glu Met Ser Pro Asn Asp Ile Phe
145		150 155 160
Asn	Val	Ile Asp Arg Thr Leu Thr Ala Gln Arg Val Met Gly Met Met
		165 170 175
Val	Arg	Ser Lys Val Met Leu Lys Val Thr Pro Gly Lys Ile Arg Glu
		180 185 190
Tyr	Tyr	Arg Lys Leu Glu Glu Ala Ser Arg Lys Val Ile Trp Lys
		195 200 205
Tyr	Arg	Val Leu Thr Ile Lys Ala Asn Thr Glu Ser Leu Ala Ser Gln
		210 215 220
Ile	Ala	Asp Lys Val Arg Ala Arg Leu Asn Glu Ala Lys Thr Trp Asp
225		230 235 240
Lys	Asp	Arg Leu Thr Ala Leu Val Ile Ser Gln Gly Gly Gln Leu Val
		245 250 255
Cys	Ser	Glu Glu Phe Ser Arg Glu Asn Ser Glu Leu Ser Gln Ser His
		260 265 270
Lys	Gln	Glu Leu Asp Leu Ile Gly Tyr Pro Lys Glu Leu Cys Gly Leu
		275 280 285
Pro	Lys	Ala His Lys Ser Gly Tyr Lys Leu Tyr Met Leu Leu Asp Lys
		290 295 300
Thr	Ser	Gly Ser Ile Glu Pro Leu Asp Val Met Glu Ser Lys Ile Lys
305		310 315 320
Gln	His	Leu Phe Ala Leu Glu Ala Glu Ser Val Glu Lys Gln Tyr Lys
		325 330 335
Asp	Arg	Leu Arg Lys Arg Tyr Gly Tyr Asp Ala Ser Met Ile Ala Lys
		340 345 350
Leu	Leu	Ser Glu Glu Ala Pro Pro Leu Phe Ser Leu Leu
		355 360 365

&lt;210&gt;1134

&lt;211&gt;277

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1134

Val	Thr	Arg	Ser	Ser	Pro	Ala	Gln	Leu	Ser	Arg	Phe	Leu	Ser	Glu	Ile
1															15
Gln															
Asn	Ile	Val	Lys	Lys	Ile	Val	Ala	Thr	Ser	Glu	Val	Ile	Pro	Gln	Asp
Trp	Val	Leu	Glu	Ile	Gly	Pro	Gly	Phe	Gly	Ala	Leu	Thr	Glu	Glu	Leu
Ile	Ala	Ala	Gly	Ala	Gln	Val	Ile	Ala	Ile	Glu	Lys	Asp	Pro	Met	Phe
65															80
Ala	Pro	Ser	Leu	Glu	Glu	Leu	Pro	Ile	Arg	Leu	Glu	Ile	Ile	Asp	Ala
Cys	Lys	Tyr	Pro	Leu	Asp	Gln	Leu	Gln	Glu	Tyr	Lys	Thr	Leu	Gly	Lys
Gly	Arg	Val	Val	Ala	Asn	Leu	Pro	Tyr	His	Ile	Thr	Thr	Pro	Leu	Leu
Thr	Lys	Leu	Phe	Leu	Glu	Ala	Pro	Asp	Phe	Trp	Lys	Thr	Val	Thr	Val
130															
Met	Val	Gln	Asp	Glu	Val	Ala	Arg	Arg	Ile	Val	Ala	Gln	Pro	Gly	Gly
145															160

Arg Asp Tyr Gly Ser Leu Thr Ile Phe Leu Gln Phe Phe Ala Asp Ile  
 165 170 175  
 His Tyr Ala Phe Lys Val Ser Ala Ser Cys Phe Tyr Pro Lys Pro Gln  
 180 185 190  
 Val Gln Ser Ala Val Ile His Met Lys Val Lys Glu Thr Leu Pro Leu  
 195 200 205  
 Ser Asp Glu Glu Ile Pro Val Phe Phe Thr Leu Thr Arg Thr Ala Phe  
 210 215 220  
 Gln Gln Arg Arg Lys Val Leu Ala Asn Thr Leu Lys Gly Leu Tyr Pro  
 225 230 235 240  
 Lys Glu Gln Val Glu Gln Ala Leu Lys Glu Leu Gly Leu Leu Leu Asn  
 245 250 255  
 Val Arg Pro Glu Val Leu Ser Leu Asn Asp Tyr Leu Ala Leu Phe His  
 260 265 270  
 Lys Met Gln Ala Gly  
 275

&lt;210&gt;1135

&lt;211&gt;644

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1135

Met Thr Ser Ser Ser Cys Pro Leu Leu Asp Leu Ile Leu Ser Pro Ala  
 1 5 10 15  
 Asp Leu Lys Leu Ser Ile Ser Gln Leu Pro Gly Leu Ala Glu Glu  
 20 25 30  
 Ile Arg Tyr Arg Ile Ile Ser Val Leu Ser Gln Thr Gly Gly His Leu  
 35 40 45  
 Ser Ser Asn Leu Gly Ile Val Glu Leu Thr Ile Ala Leu His Tyr Val  
 50 55 60  
 Phe Ser Ser Pro Lys Asp Lys Phe Ile Phe Asp Val Gly His Gln Thr  
 65 70 75 80  
 Tyr Pro His Lys Leu Leu Thr Gly Arg Asn Asn Glu Gly Phe Asp His  
 85 90 95  
 Ile Arg Asn Asp Asn Gly Leu Ser Gly Phe Thr Asn Pro Thr Glu Ser  
 100 105 110  
 Asp His Asp Leu Phe Phe Ser Gly His Ala Gly Thr Ala Leu Ser Leu  
 115 120 125  
 Ala Leu Gly Met Ala Gln Thr Thr Pro Leu Glu Ser Arg Thr His Val  
 130 135 140  
 Ile Pro Ile Leu Gly Asp Ala Ala Phe Ser Cys Gly Leu Thr Leu Glu  
 145 150 155 160  
 Ala Leu Asn Asn Ile Ser Thr Asp Leu Ser Lys Phe Val Val Ile Leu  
 165 170 175  
 Asn Asp Asn Asn Met Ser Ile Ser Lys Asn Val Gly Ala Met Ser Arg  
 180 185 190  
 Ile Phe Ser Arg Trp Leu His His Pro Ala Thr Asn Lys Leu Thr Lys  
 195 200 205  
 Gln Val Glu Lys Trp Leu Ala Lys Ile Pro Arg Tyr Gly Asp Ser Leu  
 210 215 220  
 Ala Lys His Ser Arg Arg Leu Ser Gln Cys Val Lys Asn Leu Phe Cys  
 225 230 235 240  
 Pro Thr Pro Leu Phe Glu Gln Phe Gly Leu Ala Tyr Val Gly Pro Ile  
 245 250 255  
 Asp Gly His Asn Val Lys Leu Ile Pro Ile Leu Gln Ser Val Arg  
 260 265 270  
 Asn Leu Pro Phe Pro Ile Leu Val His Val Cys Thr Thr Lys Gly Lys  
 275 280 285  
 Gly Leu Asp Gln Ala Gln Asn Asn Pro Ala Lys Tyr His Gly Val Arg  
 290 295 300  
 Ala Asn Phe Asn Lys Arg Glu Ser Ala Lys His Leu Pro Ala Ile Lys  
 305 310 315 320  
 Pro Lys Pro Ser Phe Pro Asp Ile Phe Gly Gln Thr Leu Cys Glu Leu  
 325 330 335  
 Gly Glu Val Ser Ser Arg Leu His Val Val Thr Pro Ala Met Ser Ile

340	345	350
Gly Ser Arg Leu Glu Gly Phe Lys Gln Lys Phe Pro Glu Arg Phe Phe		
355	360	365
Asp Val Gly Ile Ala Glu Gly His Ala Val Thr Phe Ser Ala Gly Ile		
370	375	380
Ala Lys Ala Gly Asn Pro Val Ile Cys Ser Ile Tyr Ser Thr Phe Leu		
385	390	395
His Arg Ala Leu Asp Asn Val Phe His Asp Val Cys Met Gln Asp Leu		400
405	410	415
Pro Val Ile Phe Ala Ile Asp Arg Ala Gly Leu Ala Tyr Gly Asp Gly		
420	425	430
Arg Ser His His Gly Ile Tyr Asp Met Ser Phe Leu Arg Ala Met Pro		
435	440	445
Gln Met Ile Ile Cys Gln Pro Arg Ser Gln Val Val Phe Gln Gln Leu		
450	455	460
Leu Tyr Ser Ser Leu His Trp Ser Ser Pro Ser Ala Ile Arg Tyr Pro		
465	470	475
Asn Ile Pro Ala Pro His Gly Asp Pro Leu Thr Gly Asp Pro Asn Phe		
485	490	495
Leu Arg Ser Pro Gly Asn Ala Glu Thr Leu Ser Gln Gly Glu Asp Val		
500	505	510
Leu Ile Ile Ala Leu Gly Thr Leu Cys Phe Thr Ala Leu Ser Ile Lys		
515	520	525
His Gln Leu Leu Ala Tyr Gly Ile Ser Ala Thr Val Val Asp Pro Ile		
530	535	540
Phe Ile Lys Pro Phe Asp Asn Asp Leu Phe Ser Leu Leu Leu Met Ser		
545	550	555
His Ser Lys Val Ile Thr Ile Glu Glu His Ser Ile Arg Gly Gly Leu		
565	570	575
Ala Ser Glu Phe Asn Asn Phe Val Ala Thr Phe Asn Phe Lys Val Asp		
580	585	590
Ile Leu Asn Phe Ala Ile Pro Asp Thr Phe Leu Ser His Gly Ser Lys		
595	600	605
Glu Ala Leu Thr Lys Ser Ile Gly Leu Asp Glu Ser Ser Met Thr Asn		
610	615	620
Arg Ile Leu Thr His Phe Asn Phe Arg Ser Lys Lys Gln Thr Val Gly		
625	630	635
Asp Val Arg Val		640

&lt;210&gt;1136

&lt;211&gt;127

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1136

Ala Ser Pro Ala Arg Ser Ile Ala Lys Ile Thr Gly Arg Ser Cys Met		
1	5	10
Gln Thr Ser Trp Lys Thr Leu Ser Arg Ala Arg Cys Lys Asn Val Glu		
20	25	30
Tyr Ile Glu Gln Ile Thr Gly Leu Pro Ala Phe Ala Met Pro Ala Leu		
35	40	45
Lys Val Thr Ala Trp Pro Ser Ala Ile Pro Thr Ser Lys Lys Arg Ser		
50	55	60
Gly Asn Phe Cys Leu Lys Pro Ser Lys Arg Asp Pro Ile Asp Ile Ala		
65	70	75
Gly Val Thr Thr Trp Arg Arg Glu Glu Thr Ser Pro Ser Ser His Ser		
85	90	95
Val Trp Pro Asn Ile Ser Gly Lys Glu Gly Leu Gly Leu Ile Ala Gly		
100	105	110
Arg Cys Phe Ala Asp Ser Arg Leu Leu Lys Phe Ala Leu Thr Pro		
115	120	125

&lt;210&gt;1137

&lt;211&gt;554

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1137

Met Ser Ser Pro Pro Gln Ala Val Ala Ser Leu Thr Glu Arg Ile Lys  
 1 5 10 15  
 Thr Leu Leu Glu Ser Asn Phe Cys Gln Ile Ile Val Lys Gly Glu Leu  
 20 25 30  
 Ser Asn Val Ser Leu Gln Pro Ser Gly His Leu Tyr Phe Gly Ile Lys  
 35 40 45  
 Asp Ser Gln Ala Phe Leu Asn Gly Ala Phe Phe His Phe Lys Ser Lys  
 50 55 60  
 Tyr Tyr Asp Arg Lys Pro Lys Asp Gly Asp Ala Val Ile Ile His Gly  
 65 70 75 80  
 Lys Leu Ala Val Tyr Ala Pro Arg Gly Gln Tyr Gln Ile Val Ala His  
 85 90 95  
 Ala Leu Val Tyr Ala Gly Glu Gly Asp Leu Leu Gln Lys Phe Glu Glu  
 100 105 110  
 Thr Lys Arg Arg Leu Thr Ala Glu Gly Tyr Phe Ala Thr Glu Lys Lys  
 115 120 125  
 Lys Pro Leu Pro Phe Ala Pro Gln Cys Ile Gly Val Ile Thr Ser Pro  
 130 135 140  
 Thr Gly Ala Val Ile Gln Asp Ile Leu Arg Val Leu Ser Arg Arg Ala  
 145 150 155 160  
 Arg Asn Tyr Lys Ile Leu Val Tyr Pro Val Thr Val Gln Gly Asn Ser  
 165 170 175  
 Ala Ala His Glu Ile Ser Lys Ala Ile Glu Val Met Asn Ala Glu Asn  
 180 185 190  
 Leu Ala Asp Val Leu Ile Ile Ala Arg Gly Gly Ser Ile Glu Asp  
 195 200 205  
 Leu Trp Ala Phe Asn Glu Glu Ile Leu Val Lys Ala Ile His Ala Ser  
 210 215 220  
 Thr Ile Pro Ile Val Ser Ala Val Gly His Glu Thr Asp Tyr Thr Leu  
 225 230 235 240  
 Cys Asp Phe Ala Ser Asp Val Arg Ala Pro Thr Pro Ser Ala Ala Ala  
 245 250 255  
 Glu Ile Val Cys Lys Ser Ser Glu Glu Gln Val Gln Val Phe Glu Gly  
 260 265 270  
 Tyr Leu Arg His Leu Leu Ser His Ser Arg Gln Leu Leu Thr Ser Lys  
 275 280 285  
 Lys Gln Gln Leu Leu Pro Trp Arg Arg Phe Leu Asp Arg Ala Glu Phe  
 290 295 300  
 Tyr Thr Thr Ala Gln Gln Leu Asp Ser Ile Glu Ile Ala Ile Gln  
 305 310 315 320  
 Lys Gly Val Gln Gly Lys Ile His Glu Ser Lys Gln Arg Tyr Asp Asn  
 325 330 335  
 Ile Ser Arg Trp Leu Gln Gly Asp Leu Val Ser Arg Met Thr Cys Arg  
 340 345 350  
 Leu Gln Ser Leu Lys Lys Met Leu Ser Gln Ala Leu Ser His Lys Ala  
 355 360 365  
 Leu Ser Leu Gln Val Arg Cys His Gln Leu Lys Lys Ser Leu Thr Tyr  
 370 375 380  
 Pro Arg Gln Ile Gln Gln Ala Ser Gln Lys Leu Ser Pro Trp Arg Gln  
 385 390 395 400  
 Gln Leu Asp Thr Leu Ile Ser Arg Arg Leu His Tyr Gln Lys Glu Glu  
 405 410 415  
 Tyr Phe His Lys His Thr Arg Leu Lys His Ala His Asn Val Leu Glu  
 420 425 430  
 Gln Gln Leu Arg Ser His Val Gln Lys Leu Glu Leu Leu Gly Arg Arg  
 435 440 445  
 Leu Ser Arg Gly Cys Glu Leu Asn Leu Gln Asn Gln Lys Ile Ala Tyr  
 450 455 460  
 Ala Asn Val Lys Glu Thr Leu Ala Thr Ile Leu Glu Arg Arg Tyr Glu  
 465 470 475 480  
 Asn Ser Val Ala Arg Tyr Ser Ala Leu Lys Glu Gln Leu His Ser Leu  
 485 490 495  
 Asn Pro Lys Asn Val Leu Lys Arg Gly Tyr Ala Met Leu Phe Asp Phe

500	505	510
Asn Glu Asn Ser Ala Met Ile Ser Val Asp Ser Leu Gln Glu Asn Ala		
515	520	525
Arg Val Arg Ile Gln Leu Gln Asp Gly Glu Ala Ile Leu Thr Val Thr		
530	535	540
Asn Ile Glu Ile Cys Lys Leu Ile Lys Gly		
545	550	
<210>1138		
<211>184		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1138		
Met Thr Tyr Ala Gln Val Glu Val Leu Met Ala Thr Pro Asp Ile Ser		
1	5	10
Lys Tyr His Gly Leu Arg Asp Arg Cys Leu Met Glu Leu Phe Tyr Ser		
20	25	30
Ser Gly Leu Arg Ile Ser Glu Ile Val Ala Val Asn Lys Gln Asp Phe		
35	40	45
Asp Leu Ser Thr His Leu Ile Arg Ile Arg Gly Lys Gly Lys Lys Glu		
50	55	60
Arg Ile Ile Pro Val Thr Ser Asn Ala Ile Gln Trp Ile Gln Ile Tyr		
65	70	75
Leu Asn His Pro Asp Arg Lys Arg Leu Glu Lys Asp Pro Gln Ala Ile		
85	90	95
Phe Leu Asn Arg Phe Gly Arg Arg Ile Ser Thr Arg Ser Ile Asp Arg		
100	105	110
Ser Phe Gln Glu Tyr Leu Arg Arg Ser Gly Leu Ser Gly His Ile Thr		
115	120	125
Pro His Thr Ile Arg His Thr Ile Ala Thr His Trp Leu Glu Ser Gly		
130	135	140
Met Asp Leu Lys Thr Ile Gln Ala Leu Leu Gly His Ser Ser Leu Glu		
145	150	155
Thr Thr Thr Val Tyr Thr Gln Val Ser Val Lys Leu Lys Lys Gln Thr		
165	170	175
His Gln Glu Ala His Pro His Ala		
180		
<210>1139		
<211>288		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1139		
Met Ser His Leu Ile Pro Ser Leu Arg Asn Ser Val Thr Ser Tyr Phe		
1	5	10
His Lys Pro Gln Pro Ile Lys Gln Ala Ala Pro Ser Lys Ser Ile Arg		
20	25	30
Asp Ile Cys Asn Ile Ala Tyr Leu Ile Ile Cys Val Leu Val Val		
35	40	45
Val Val Leu Val Gly Ala Met Leu Cys Met Phe Ile Pro Ser Val Gly		
50	55	60
Ile Pro Leu Cys Leu Ser Ser Leu Ala Leu Leu Val Leu Leu Ser Ile		
65	70	75
Phe Asn Pro Cys Leu Ile Asn Trp Ile Ser Thr Lys Lys Thr Lys Glu		
85	90	95
Ile Ala Pro Lys Asp Ala Ser Glu Ser Gln Pro Thr Lys Ser Ala Ser		
100	105	110
Arg Lys Gly Ser Pro Gln Leu Ser Pro His His Asp His Glu Pro Lys		
115	120	125
Asn Phe Ile Arg Thr Gln Leu Glu Lys Gly Val Asn Tyr Val Thr Asn		
130	135	140
Lys Phe Lys Ser Gly Glu Glu Ser Pro His Ile Ser Asp Glu His His		
145	150	155
Ser Pro Arg Gln Ser Lys Arg Ser Ser Glu Ile Glu Ser Ser Asp Glu		
165	170	175
Ser Ser Pro Glu Leu His Arg Lys Ala Lys Gly Lys Ala Pro His Thr		

180	185	19
Ala Thr Thr Lys Gly Ser Lys Thr Ser Thr Thr Glu Ser Ser Lys Lys		
195	200	205
Lys Lys Lys Thr Lys His Ser Leu His Arg Thr Thr Ser Ser Ile His		
210	215	220
Lys Arg Ser Ala Pro Lys Pro Met Val Pro Ser Lys Lys Arg Lys Pro		
225	230	235
Val Leu Leu Lys Lys Thr Val Pro Leu Pro Ile Glu Asp Leu Glu His		
245	250	255
Gln Ser Ser Gly Asn Glu Ser Ser Asp Ser Ser Ser Pro Pro Pro Val		
260	265	270
Gln Arg Lys Ala Ile Leu Pro Trp Phe Cys Lys Gln Pro Thr Asp Pro		
275	280	285

&lt;210&gt;1140

&lt;211&gt;153

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1140

Met Leu Arg Arg Arg Ile Trp Lys Lys Thr Leu Thr Pro Asp Gln Glu		
1	5	10
Asn Leu Ser Leu Pro Leu Pro Ser Pro Thr Thr Leu Lys Lys Ile His		
20	25	30
Ala Leu His Ile Leu Val Arg Ser Gly Lys Thr Tyr Asn Glu Leu Ile		
35	40	45
Gln Glu Gly Phe Ser Phe Thr Lys Ile Thr Asp Leu Gly Gln Ala Pro		
50	55	60
Ser Pro Lys Gln Asp Ile Gly Phe Ser Tyr Asn Ser Leu Leu Pro Asn		
65	70	75
Phe Tyr Phe His Ser Leu Val Ser Val Pro Asn Ile Ser Gly Glu Glu		
85	90	95
Arg Ala Leu Asn Tyr His Lys Glu Gln Gln Glu Glu Met Ala Val Lys		
100	105	110
Leu Lys Thr Met Gln Ala Cys Ser Phe Val Phe Arg Ser Leu His Leu		
115	120	125
Pro Ser Met Gln Thr Lys Asp Lys Lys Ala Gly Phe Gly Leu Leu Thr		
130	135	140
Phe Phe Pro Trp Lys Ile Tyr Pro Leu		
145	150	

&lt;210&gt;1141

&lt;211&gt;136

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1141

Leu Ala Met Ala Lys Asn Val Pro Leu Leu Gly Tyr Ser Ser Leu Glu		
1	5	10
Gly Tyr Leu Leu Ser Lys Asp Glu Lys Lys Ala Leu Met Leu Pro Leu		
20	25	30
Gly Lys Arg Gly Gly Val Leu Thr Leu Ser Ser Glu Ile Pro Glu Glu		
35	40	45
Gly Leu Asn Glu Lys Arg Arg Gly Val Gly Pro Gly Ala Leu Leu Ser		
50	55	60
Tyr Glu Glu Ala Ser Asp Tyr Cys Val Ala His Gly Tyr Tyr His Val		
65	70	75
Ile Ser Pro Asn Pro Gln Leu Phe Ala Ser Ser Phe Ser Asp Lys Ile		
85	90	95
Thr Val Glu Glu Val Ala Pro Ser Val Glu Gln Ile Arg Arg His Val		
100	105	110
Ile Ser Gln Phe Met Phe Val Glu Tyr Asp Lys Gln Leu Ser Pro Asp		
115	120	125
Tyr Arg Ser Tyr Ser Cys Ile Phe		
130	135	

&lt;210&gt;1142

&lt;211&gt;82

&lt;212&gt;PRT

<213>Chlamydia p oniae

<400>1142

Met	Ile	Glu	Phe	Pro	Ser	Ala	Val	Trp	Met	Ile	Glu	Glu	Ile	Leu	Pro
1									5	10					15
Glu	Cys	Asp	Phe	Leu	Ser	Ile	Gly	Thr	Asn	Asp	Leu	Val	Gln	Tyr	Thr
						20			25					30	
Leu	Gly	Ile	Ser	Arg	Glu	Ser	Ala	Leu	Pro	Lys	His	Leu	Asn	Val	Thr
						35			40				45		
Leu	Pro	Pro	Ala	Val	Ile	Arg	Met	Ile	His	His	Val	Leu	Gln	Ala	Ala
						50			55			60			
Asn	Lys	Ile	Arg	Phe	Leu	Leu	Ala	Phe	Val	Glu	Arg	Pro	Gln	Gly	Ser
						65			70			75			80
Ser	Val														

<210>1143

<211>108

<212>PRT

<213>Chlamydia pneumoniae

<400>1143

Leu	Phe	Asp	Ala	Leu	His	Ile	Ser	Leu	His	Arg	Asn	Ile	Pro	Arg	Met
1									5	10				15	
Gly	Asn	His	Glu	Thr	Tyr	Ile	His	Pro	Gly	Val	Leu	Pro	Ser	Ser	His
						20			25				30		
Ala	Gln	Asp	Val	Ser	Arg	Ser	Thr	Val	Tyr	Pro	Ser	Arg	Ser	Phe	Ile
						35			40			45			
Met	Arg	Arg	Met	Leu	Met	Gly	Trp	Asn	Phe	Asn	Arg	Val	Pro	Ser	Lys
						50			55			60			
Ser	Ser	Glu	Gln	Leu	Met	Asp	Gly	His	Arg	Ile	Pro	Leu	Ile	Phe	Phe
						65			70			75			80
Gly	Lys	His	His	Pro	Thr	Ile	Ser	Ile	Leu	Asn	Val	Asn	Arg	Phe	Ser
						85			90			95			
Trp	Leu	Ser	Ile	Phe	Tyr	Asn	Gly	Glu	Arg	Gly	Phe				
						100			105						

<210>1144

<211>141

<212>PRT

<213>Chlamydia pneumoniae

<400>1144

Met	Ala	Thr	Lys	Thr	Lys	Thr	Gln	Trp	Thr	Cys	Asn	Gln	Cys	Gly	Ala
1									5	10				15	
Thr	Ala	Pro	Lys	Trp	Leu	Gly	Gln	Cys	Pro	Gly	Cys	His	Asn	Trp	Asn
									20	25			30		
Ser	Leu	Val	Glu	Glu	Tyr	Val	Pro	Gln	Ala	Arg	Ser	Gly	Thr	Ser	Ser
									35	40		45			
Arg	Ser	Ser	Thr	Ser	Ala	Ile	Ala	Leu	Ser	Ser	Ile	Glu	Leu	Glu	Asn
						50			55			60			
Glu	Ser	Arg	Ile	Phe	Ile	Asp	His	Ala	Gly	Trp	Asp	Arg	Ile	Leu	Gly
						65			70			75			80
Gly	Gly	Val	Val	Arg	Gly	Ser	Leu	Thr	Leu	Leu	Gly	Gly	Asp	Pro	Gly
						85			90			95			
Ile	Gly	Lys	Ser	Thr	Leu	Leu	Leu	Gln	Thr	Ala	Glu	Arg	Leu	Ala	Ser
						100			105			110			
Gln	Lys	Tyr	Lys	Val	Leu	Tyr	Val	Cys	Gly	Glu	Glu	Ser	Val	Thr	Gln
						115			120			125			
Thr	Ser	Leu	Arg	Ala	Lys	Arg	Ser	Ile	Ser	His	His	Leu			
						130			135			140			

<210>1145

<211>77

<212>PRT

<213>Chlamydia pneumoniae.

<400>1145

Met	Thr	Lys	Ile	Gln	Cys	Ser	Ala	Gln	Tyr	Tyr	Arg	Ser	Arg	Pro	Ala
1									5	10				15	
Glu	Arg	Ala	Gln	Thr	Pro	Pro	Gln	Pro	Phe	Leu	Ala	Arg	Asp	Arg	Ala

20	25
Asp Phe Trp Glu Arg His Pro Arg Phe Ser Ala Cys Cys Arg Val Leu	
35	40
Leu Leu Val Ala Trp Val Val Leu Ala Leu Leu Phe Leu Phe Val Met	45
50	55
Leu Leu Pro Leu Ala Ala Gly Ser Tyr Leu Leu Ala Phe	60
65	70
	75
<210>1146	
<211>121	
<212>PRT	
<213>Chlamydia pneumoniae	
<400>1146	
Leu Thr Tyr Thr Arg Val Asn Asp Gly His Leu Ala Pro Phe Arg Ala	
1	5
Gly Ala Lys Trp Ile Leu Ile His Tyr Val Arg Leu Arg Arg Gln His	10
20	25
Asn Gln Asn Asp Phe Phe Thr Pro Gly His Ser Cys Tyr Tyr Ala Arg	30
35	40
Leu Ala Phe Asn Gln Thr Gln Arg Leu Tyr His Gln Leu Phe Asn Val	45
50	55
Glu Lys Leu Arg Ser Ile Tyr Ala Asn Met Asp Lys Asp Pro Leu Cys	60
65	70
His Pro Trp Ala Xaa Ile Pro Ile Tyr Asp Leu Leu Lys Thr Glu Asp	75
85	90
His Gly Asp Gly Phe Leu Glu Gln Gln Glu Asp Arg Glu Tyr Pro Ser	80
100	105
Arg Ala Ala Gln Asp Gln Phe Trp Gly	95
115	120
<210>1147	
<211>170	
<212>PRT	
<213>Chlamydia pneumoniae	
<400>1147	
Val Ser Ala Glu Phe Lys Leu Met Leu Asp Leu Arg Gln Tyr Met Gly	
1	5
Ser Val Met Gln Arg Leu Gly Leu Ser Asn Leu Phe His Cys Leu Leu	10
20	25
Leu Phe Leu Arg Tyr Tyr Ser Lys Leu Val Phe Gly Leu Thr Val	30
35	40
Leu Leu Ala Ala Ile Ser Val Ile Cys Leu Leu Gly Cys Ser Glu Pro	45
50	55
Ser Leu Ser Ser Phe Thr Glu Tyr Val Gly Pro Glu Tyr Ser Ala Ala	60
65	70
Ala Gln Leu Ser Ile Glu Gln Ser Cys His Asp Glu Val Tyr Gly Gln	75
85	90
Gln Val Val Val Thr Trp Ser Leu Pro Ser Arg Met Arg Lys Cys Leu	80
100	105
Pro Val Thr Leu Tyr Leu Trp Val Tyr Tyr Gly Asn Gly Lys Val Glu	95
115	120
Lys Leu Thr Tyr Glu Val Asn Gln Ser Ala Gly Tyr Arg Val Tyr Cys	110
130	135
Leu Lys Gly Leu Glu Tyr Lys Glu Leu Gln Gly Ile Ile Ser Tyr Pro	140
145	150
Leu Arg Tyr Val Ala Gly Ile Lys Arg Leu	155
165	170
<210>1148	
<211>101	
<212>PRT	
<213>Chlamydia pneumoniae	
<400>1148	
Met Val Ser Pro Leu Ser Leu Phe His Lys Met Leu Leu Glu Asn Trp	
1	5
Thr Pro Val Glu Glu Pro Phe Pro Trp Pro Pro Ala Glu Lys Asn Gln	10
20	25
	15
	30

Lys Ile Phe Ala Trp Ala Leu Asn Gln Ser Lys Leu Ile Phe Val Ser  
       35                 40                 45  
 Thr Ser Gly Asn Ile Ala Gln Pro Arg Leu Val Thr Asp Ser Met Ser  
       50                 55                 60  
 Met Met Ile Val Asn Ala Ala Asn Arg Thr Met Ser Arg Asp Gly Ala  
       65                 70                 75                 80  
 Gly Thr Asn Gln Val Leu Ser Ala Ala Val Ser Val Asp Ser Trp Gly  
       85                 90                 95  
 Cys Arg Asn Asp Leu  
       100  
 <210>1149  
 <211>119  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1149  
 Val Ala Leu Lys Ile Arg Leu Arg Gln Gln Gly Arg Arg Asn His Val  
       1                 5                 10                 15  
 Val Tyr Arg Leu Val Leu Ala Asp Val Glu Ser Pro Arg Asp Gly Lys  
       20                 25                 30  
 Tyr Ile Glu Leu Leu Gly Trp Tyr Asp Pro His Ser Ser Ile Asn Tyr  
       35                 40                 45  
 Gln Leu Lys Ser Glu Arg Ile Phe Tyr Trp Leu Glu Arg Gly Ala Gln  
       50                 55                 60  
 Leu Ser Ser Lys Ala Glu Ala Leu Val Lys Gln Gly Ala Pro Gly Val  
       65                 70                 75                 80  
 Tyr Ser Ala Leu Leu Ser Lys Gln Glu Ala Arg Lys Leu Val Val Arg  
       85                 90                 95  
 Lys Lys Arg Arg Ala Tyr Arg Gln Arg Ser Thr Gln Arg Glu Glu  
       100                105                110  
 Ala Ala Lys Asp Ala Thr Lys  
       115  
 <210>1150  
 <211>170  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1150  
 Met Ser Glu Val Lys Pro Leu Phe Leu Lys Asn Asp Ser Phe Asp Leu  
       1                 5                 10                 15  
 Ala Thr Gln Arg Phe Gln Asn Leu Ile Asn Met Leu Gln Glu Gln Ala  
       20                 25                 30  
 Glu Ile Tyr Asn Glu Tyr Glu Glu Lys Asn Ala Arg Val Gln Asn Glu  
       35                 40                 45  
 Ile Lys Glu Gln Lys Asp Phe Val Lys Arg Cys Ile Glu Asp Phe Glu  
       50                 55                 60  
 Ala Arg Gly Leu Gly Val Leu Lys Glu Glu Leu Ala Ser Leu Thr Arg  
       65                 70                 75                 80  
 Asp Phe His Asp Lys Ala Lys Ala Glu Thr Ser Met Leu Ile Glu Cys  
       85                 90                 95  
 Pro Cys Ile Gly Phe Tyr Tyr Ser Ile His Gln Glu Glu Gln Arg Gln  
       100                105                110  
 Arg Gln Glu Arg Leu Gln Lys Met Ala Glu Arg Tyr Arg Asp Cys Lys  
       115                120                125  
 Gln Val Leu Glu Ala Val Gln Val Glu Gln Lys Asp Met Ile Ser Ser  
       130                135                140  
 Arg Val Val Val Asp Asp Ser Tyr Phe Glu Glu Lys Glu Glu Gln  
       145                150                155                160  
 Lys Val Asp Asn Arg Lys Lys Glu Gln Asp  
       165                170  
 <210>1151  
 <211>90  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1151  
 Leu Val Phe Ser Tyr Tyr Cys Met Gly Leu Phe Phe Ser Gly Ala

1	5	10	15
Ile Ser Ser Cys Gly Leu Leu Val Ser	Leu Gly Val Gly Leu Gly Leu		
20	25	30	
Ser Val Leu Gly Val Leu Leu Leu Ala Gly Leu Leu Leu Phe			
35	40	45	
Lys Ile Gln Ser Met Leu Arg Glu Val Pro Lys Ala Pro Asp Leu			
50	55	60	
Asp Leu Glu Asp Ala Ser Glu Arg Leu Arg Val Lys Ala Ser Arg Ser			
65	70	75	80
Leu Ala Ser Leu Pro Lys Lys Ser Val Ser			
85	90		

&lt;210&gt;1152

&lt;211&gt;94

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1152

Leu Leu Leu Cys Ser Ala Met Gly Ile Phe Ser Ser Ala Lys Ala Leu			
1	5	10	15
Ile Ala Trp Asn Lys Ala Ser Leu Asn Leu Ser Pro Ala Leu Leu Gly			
20	25	30	
Ala Ile Leu Ile Phe Glu Pro Ile Phe Gly Leu Val Leu Thr Tyr Leu			
35	40	45	
Tyr Ser Gln Ser Leu Pro Ser Leu Gln Glu Gly Ile Gly Ile Phe Leu			
50	55	60	
Met Leu Gly Gly Ser Leu Leu Cys Leu Val Leu Phe Gly Arg Lys Val			
65	70	75	80
Gln Lys Ser Leu Glu Asn Ser Gln Val Ser Ser Ser Asn Glu			
85	90		

&lt;210&gt;1153

&lt;211&gt;248

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1153

Met Phe Pro Ser Ala Asn Gln Glu Ser Arg Thr Arg Asn Val Pro Leu			
1	5	10	15
Gly Ile Phe His Gly Leu Val Ala Cys Leu Tyr Trp Gly Ile Val Phe			
20	25	30	
Val Ile Pro Asn Phe Leu Gly Ser Phe Gly Asp Leu Asp Ile Val Leu			
35	40	45	
Thr Arg Tyr Thr Ile Phe Gly Ile Phe Ser Leu Ile Ala Cys Ala Ile			
50	55	60	
Lys Asn Pro Ser Val Ile Lys Lys Thr Pro Leu Tyr Ile Trp Arg Lys			
65	70	75	80
Ser Leu Leu Trp Thr Leu Leu Ile Asn Pro Val Tyr Tyr Phe Gly Ile			
85	90	95	
Thr Leu Gly Ile Arg Tyr Val Gly Ser Ala Ile Thr Val Val Ile Ala			
100	105	110	
Ser Leu Ala Pro Thr Ala Val Leu Tyr His Ser Asn Thr Lys Gln Lys			
115	120	125	
Glu Leu Pro Tyr Ser Leu Leu Phe Ala Ile Ser Ser Val Ile Ile Thr			
130	135	140	
Gly Val Ile Leu Thr His Leu Ser Ala Leu Asn Leu Pro Thr Ala Ala			
145	150	155	160
Ser Pro Leu Tyr Ser Ile Leu Gly Val Ile Ala Val Ile Leu Ser Thr			
165	170	175	
Ser Leu Trp Val Ile Tyr Val Ile Arg Asn Gln Ser Leu Leu Glu Lys			
180	185	190	
His Pro Xaa Leu Thr Pro Asp Tyr Leu Glu Leu Pro His Arg Asn Gln			
195	200	205	
Arg Phe Asp His Leu Pro Pro Tyr Asp Tyr Tyr Ser Arg Ser Leu Trp			
210	215	220	
Asn Tyr Pro Arg Asn Thr Gln Ser Tyr Leu Ala Tyr Thr Gly Ile Arg			
225	230	235	240
Ala Thr Ala Leu Leu Val Ala Met			

&lt;210&gt;1154

&lt;211&gt;149

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1154

Met Ala Val Gln Ser Ile Lys Glu Ala Val Thr Ser Ala Ala Thr Ser  
 1               5               10               15  
 Val Gly Cys Val Asn Cys Ser Arg Glu Ala Ile Pro Ala Phe Asn Thr  
 20              25              30  
 Glu Glu Arg Ala Thr Ser Ile Ala Arg Ser Val Ile Ala Ala Ile Ile  
 35              40              45  
 Ala Val Val Ala Ile Ser Leu Leu Gly Leu Gly Leu Val Val Leu Ala  
 50              55              60  
 Gly Cys Cys Pro Leu Gly Met Ala Ala Gly Ala Ile Thr Met Leu Leu  
 65              70              75              80  
 Gly Val Ala Leu Leu Ala Trp Ala Ile Leu Ile Thr Leu Arg Leu Leu  
 85              90              95  
 Asn Ile Pro Lys Ala Glu Ile Pro Ser Pro Gly Asn Asn Gly Glu Pro  
 100             105             110  
 Asn Glu Arg Asn Ser Ala Thr Pro Pro Leu Glu Gly Gly Val Ala Gly  
 115             120             125  
 Glu Ala Gly Arg Gly Gly Ser Pro Leu Thr Gln Leu Asp Leu Asn  
 130             135             140  
 Ser Gly Ala Gly Ser  
 145

&lt;210&gt;1155

&lt;211&gt;124

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1155

Met Gly Asn Ser Cys Phe Trp Arg Gly Gly Leu Leu Arg Tyr Pro Cys  
 1               5               10               15  
 Gly Glu Glu Ile Glu Lys Ser Arg Ala Asn Phe Phe Thr Ala Asp Thr  
 20              25              30  
 Thr Thr Val Met Ser Tyr Pro Pro Asn Pro Tyr Gly Leu Tyr Asp Met  
 35              40              45  
 Ala Gly Asn Val Tyr Glu Trp Cys Gln Asp Trp Tyr Gly Tyr Asp Phe  
 50              55              60  
 Tyr Glu Ile Ser Ala Gln Glu Pro Glu Ser Pro Gln Gly Pro Ala Gln  
 65              70              75              80  
 Gly Val Tyr Arg Val Leu Arg Gly Gly Cys Trp Lys Ser Leu Lys Asp  
 85              90              95  
 Asp Leu Arg Cys Ala His Arg His Arg Asn Asn Pro Gly Ala Val Asn  
 100             105             110  
 Ser Thr Tyr Gly Phe Arg Cys Ala Lys Asn Ile Asn  
 115             120

&lt;210&gt;1156

&lt;211&gt;181

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1156

Lys Leu Lys Leu Leu Lys Ala Ser Phe Ile Lys Leu Leu Leu Thr Leu  
 1               5               10               15  
 Asp Trp Pro Thr Glu Leu Leu Lys Asn Arg Pro Phe Asp Phe Thr  
 20              25              30  
 Gly His Pro Glu Glu Lys Leu Ile Lys Asp Ile Leu Leu Lys Glu  
 35              40              45  
 Glu Gly Asn Lys Tyr Phe Ser Leu Glu Ser Lys Lys Leu Leu Ala Arg  
 50              55              60  
 His Met Met His Asn Ile Val Val Leu Ser Glu Glu Pro Gly Arg Ser  
 65              70              75              80  
 Ala Phe Leu Gly Arg Thr Ala Phe Phe Pro Asn Lys Tyr Pro Ile Ala  
 85              90              95

Gln Gly Gly Val Gly Ile Pro Ser Thr Ile Gly Asn Leu Phe Thr Ile  
 100 105 110  
 Trp Tyr Cys Phe Tyr Phe Tyr Arg Ala Ala Thr Pro Gln Ser Asp His  
 115 120 125  
 Pro Asp Gly Cys Gly Phe Ile Leu Leu Glu Arg Leu Lys Glu Leu Gly  
 130 135 140  
 Ala Gly Phe Phe Tyr Cys Asp Leu Arg Glu Ser Asn Thr Thr Gly Phe  
 145 150 155 160  
 Thr Leu Phe Phe Glu Gly Ser Asn Lys Gly Val Leu Lys Asn His Leu  
 165 170 175  
 Phe Ile Arg Asp Glu  
 180

&lt;210&gt;1157

&lt;211&gt;131

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1157

Met Asn Ile Tyr Gln Phe Ser Pro Gly Ala Ser Pro Asn Trp Gln Ala  
 1 5 10 15  
 Ser Leu Met Ala Gln Leu Asn Ser Tyr Phe Cys Leu Gly Gly Glu Thr  
 20 25 30  
 Val Thr Arg Ile Ile Ser Leu Arg Pro Ser Gly Leu Ile Leu Ala Lys  
 35 40 45  
 Lys Glu Lys Ala Val Val Ser Thr Ala Glu Lys Ile Leu Lys Ile Leu  
 50 55 60  
 Ser Phe Ile Leu Phe Pro Leu Val Ile Ala Leu Ala Ile Arg Tyr  
 65 70 75 80  
 Leu Leu Tyr Asn Lys Phe Asn Lys Asp Leu Asp Arg Ala Val Phe Phe  
 85 90 95  
 Ile Pro Thr Glu Ile Thr Lys Ala Glu Glu Leu Ile Ile Ala Lys Asn  
 100 105 110  
 Ser Cys Ala Ser Glu Arg Ser Gly Ser Asn Cys Phe Ser Ala Leu Leu  
 115 120 125  
 Phe Ser Ser  
 130

&lt;210&gt;1158

&lt;211&gt;111

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1158

Met Leu Gln His Leu Phe Ile Asp Gly Ile Thr Gln Glu Asn Pro Glu  
 1 5 10 15  
 Ala Leu Pro Asn Asn Thr Ser Gly Arg Leu Thr Leu Phe Pro Ser Val  
 20 25 30  
 Arg Tyr Ile Tyr Ser His Phe Thr Pro Gln Asn Pro Thr Ile Trp Pro  
 35 40 45  
 Gln Val Phe Phe Arg Gln Gly Pro Leu Asp Glu Asp Arg Gly Gly  
 50 55 60  
 Phe Glu Ile Leu Glu Gln Leu Glu Leu Gly Val Arg Phe Pro Ile  
 65 70 75 80  
 Cys Pro Ser Gln Gly Pro Asp Asn Pro Asn Phe Gln Gly Phe Gln Gly  
 85 90 95  
 Ile Arg Ile Tyr Trp Glu Asp Ser Tyr Gln Pro Asn Lys Glu Val  
 100 105 110

&lt;210&gt;1159

&lt;211&gt;111

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1159

Met Ser Glu Ser Ile Asn Arg Ser Ile His Leu Glu Ala Ser Thr Pro  
 1 5 10 15  
 Phe Phe Ile Lys Leu Thr Asn Leu Cys Glu Ser Arg Leu Val Lys Ile  
 20 25 30  
 Thr Ser Leu Val Ile Ser Leu Leu Ala Leu Val Gly Ala Gly Val Thr

35                          40  
Leu Val Val Leu Phe Val Ala Gly Ile Leu Pro Leu Leu Pro Val Leu  
  50                        55                          60  
Ile Leu Glu Ile Ile Leu Ile Thr Val Leu Val Leu Leu Phe Cys Leu  
  65                        70                        75                          80  
Val Leu Glu Pro Tyr Leu Ile Glu Lys Pro Ser Lys Ile Lys Glu Leu  
  85                        90                        95  
Pro Lys Val Asp Glu Leu Ser Val Val Glu Thr Asp Ser Thr Leu  
  100                      105                        110  
<210>1160  
<211>75  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1160  
Leu Ala Phe Asn Glu Ser Val Arg Ile Tyr Arg Lys Leu Phe Asn Thr  
  1                        5                        10                          15  
Ala Glu Leu Lys Gln Met Tyr Gly Ala Gly Asp Tyr Glu Gln Gln Asn  
  20                        25                        30  
Glu Asp Asn Leu Lys Ser Ile Leu Ser Phe Val Gln Ile Leu Asp Glu  
  35                        40                        45  
Lys Asp Gly Phe Asp Asp Phe Leu Ala Thr His Lys Asp Thr Thr Phe  
  50                        55                        60  
Ile Gly Arg Gly Ala Asp Ile Phe Cys Ser  
  65                        70                        75  
<210>1161  
<211>87  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1161  
Met Glu Glu Ala Leu Thr Phe Asp Asp Val Leu Leu Ile Pro Gln Tyr  
  1                        5                        10                          15  
Ser Glu Ile Leu Pro Ser Glu Val Ser Leu Lys Thr Ala Ile Ser Lys  
  20                        25                        30  
Thr Leu Ser Leu Asn Ile Pro Ile Leu Ser Ala Ala Met Asp Ser Val  
  35                        40                        45  
Thr Glu Thr Ala Met Ala Leu Ala Leu Ala Gln Glu Gly Gly Leu Gly  
  50                        55                        60  
Ile Leu His Lys Asn Met Ser Glu Val Glu Gln Ser Ser Ser Val Arg  
  65                        70                        75                          80  
Lys Ile Lys Glu Ala Tyr Pro  
  85  
<210>1162  
<211>91  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1162  
Met Asp Phe Ser Val Phe Pro Asp Arg Phe Val Glu Ser Thr Ser Pro  
  1                        5                        10                          15  
Ser Pro Ile Glu Asp Ile Asp Ala Lys Thr Leu Val Ser Asn Cys Cys  
  20                        25                        30  
His Tyr Cys Ser Arg Cys Leu Phe Ile Phe Leu Ser Leu Leu Ser Ile  
  35                        40                        45  
Ile Ile Cys Phe Ser Val Tyr Gly Thr Ser Gly Glu Thr Ala Ser Leu  
  50                        55                        60  
Val Phe Gly Ile Leu Ser Leu Ile Val Leu Val Leu Leu Ile Ile Glu  
  65                        70                        75                          80  
Cys Arg Asn Arg Glu Cys Cys Arg Arg Ile Ser  
  85                        90  
<210>1163  
<211>95  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1163  
Leu Gln Ala Gly Arg Ser Gly Ile Ile Pro Gly Lys Ala Ile Leu

1	5	10	15
Leu Asn Val Asn Asp Ala Lys Thr Pro Asn Tyr Ser Cys Ile Phe Glu			
20	25	30	
Ser Ile Gly Phe Phe Asn Glu Gln Asp Leu Glu Ala Gln His Asn Gln			
35	40	45	
Gln Ala Ala Leu Val Arg Lys Ile Leu Lys Val Val Pro His His Phe			
50	55	60	
Leu Lys Gly Leu Ile Ala Lys Leu Pro Arg Ser Leu Lys Lys Asp Arg			
65	70	75	80
Lys Phe Met Ser Ser Leu Ile Phe Thr Lys Leu Ser Tyr Cys Phe			
85	90	95	

&lt;210&gt;1164

&lt;211&gt;95

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1164

Met Met Lys Ile Lys Lys Ala Ile Ser Arg His Ile Asp Arg Tyr Leu			
1	5	10	15
Ser Pro Met Lys Ile Pro Ile Met Ala His Pro Gly Gln Lys Asp Ser			
20	25	30	
Pro Ser Thr Leu Ser Phe His Phe Pro Leu Ser Tyr Trp Phe Lys Glu			
35	40	45	
Leu Ser Ser His Gly Phe Leu Val Ser Gly Leu Glu Glu Trp Thr Ser			
50	55	60	
Ser Lys Thr Ser Thr Gly Lys Arg Ala Lys Ala Glu Asn Leu Cys Arg			
65	70	75	80
Lys Glu Phe Pro Leu Phe Leu Met Ile Ser Cys Ile Lys Ile Lys			
85	90	95	

&lt;210&gt;1165

&lt;211&gt;238

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1165

Met Glu Asn Leu Ser Ser Ala Pro Ser Arg Ser Ile Trp Lys Ser Ile			
1	5	10	15
Ile Gln Asn Lys Met Leu Val Leu Gly Leu Thr Thr Leu Ile Ile Leu			
20	25	30	
Met Leu Gly Ala Leu Leu Leu Pro Trp Phe Tyr Gln Asp Tyr Glu Gln			
35	40	45	
Thr Ser Leu Lys Asp Ile Leu Val Ser Pro Cys Ser Arg Phe Pro Phe			
50	55	60	
Gly Thr Asp Thr Leu Gly Arg Cys Met Phe Ala Arg Thr Leu Arg Gly			
65	70	75	80
Leu Arg Leu Ser Leu Leu Ile Ala Thr Ile Ala Thr Leu Ile Asp Val			
85	90	95	
Cys Val Gly Leu Leu Trp Ala Thr Val Ala Ile Ser Gly Gly Lys Lys			
100	105	110	
Ile Asp Phe Leu Met Met Arg Thr Thr Glu Ile Leu Phe Ser Leu Pro			
115	120	125	
Arg Ile Pro Ile Ile Ile Leu Leu Val Ile Phe His His Gly Leu			
130	135	140	
Leu Pro Leu Ile Leu Ala Met Thr Ile Thr Gly Trp Ile Pro Ile Ser			
145	150	155	160
Arg Ile Ile Tyr Gly Gln Phe Leu Leu Leu Lys Asn Lys Pro Phe Val			
165	170	175	
Leu Ser Ala Lys Ala Met His Ala Ser Thr Phe His Ile Leu Lys Lys			
180	185	190	
His Leu Leu Pro Asn Thr Leu Ala Pro Ile Ile Ser Thr Leu Ile Phe			
195	200	205	
Thr Ile Pro Asn Ala Ile Tyr Thr Glu Ala Phe Ile Ser Phe Leu Gly			
210	215	220	
Leu Gly Ile Gln Pro Pro Gln Ala Lys Pro Arg His Leu Ser			
225	230	235	

&lt;210&gt;1166

<211>211  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1166  
 Met Gly Pro Leu Lys Lys Glu Glu Lys Thr Ile Leu Met Ile Phe Phe  
     1              5                 10                 15  
 Leu Leu Val Val Leu Trp Thr Phe Gly Asp Leu Leu Gly Ile Ser Ala  
     20                 25                 30  
 Thr Thr Ala Ala Leu Ile Gly Leu Ser Leu Leu Ile Leu Thr Asn Ile  
     35                 40                 45  
 Leu Asp Trp Gln Lys Asp Val Ile Ala Asn Thr Thr Ala Trp Glu Thr  
     50                 55                 60  
 Phe Ile Trp Phe Gly Ala Leu Ile Met Met Ala Ser Phe Leu Asn Gln  
     65                 70                 75                 80  
 Leu Gly Phe Ile Pro Leu Val Gly Asp Ser Ala Ala Ala Leu Val Ser  
     85                 90                 95  
 Gly Leu Ser Trp Lys Ile Gly Phe Pro Leu Leu Phe Leu Ile Tyr Phe  
     100                105                110  
 Tyr Ser His Tyr Leu Phe Ala Ser Asn Thr Ala His Ile Gly Ala Met  
     115                120                125  
 Tyr Pro Ile Phe Leu Ala Val Ser Ile Ser Leu Gly Thr Asn Pro Ile  
     130                135                140  
 Phe Ala Ala Leu Thr Leu Ala Phe Ala Ser Asn Leu Phe Gly Gly Leu  
     145                150                155                160  
 Thr His Tyr Gly Ser Gly Pro Ala Pro Leu Tyr Phe Gly Ser His Leu  
     165                170                175  
 Val Thr Val Gln Glu Trp Trp Arg Ser Gly Phe Ala Leu Ser Ile Val  
     180                185                190  
 Asn Ile Val Ile Trp Ile Gly Ile Gly Ser Leu Trp Trp Lys Ala Leu  
     195                200                205  
 Gly Leu Ile  
     210  
 <210>1167  
 <211>81  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1167  
 Leu Lys Met Glu Thr Tyr Ser Phe Ser Thr Glu Leu Gln Lys Asn Thr  
     1              5                 10                 15  
 Ser Leu Tyr Ile Met Glu Lys Leu Asp Ser Tyr Phe Ser Phe Gln Gly  
     20                 25                 30  
 Lys Arg Thr Arg Val Ile Ala Ile Thr Pro Ala Gly Leu Ala Ile Ala  
     35                 40                 45  
 Tyr Glu Gln Asn Ile His Leu Ser Met Thr Val Lys Ile Leu Lys Val  
     50                 55                 60  
 Leu Ser Phe Pro Arg Ser Leu Leu Arg Thr Thr Ser Leu Trp Tyr Arg  
     65                 70                 75                 80  
 Pro

<210>1168  
 <211>228  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1168  
 Leu Lys Gly Phe Leu Ser Val Asn Glu Leu Ile Phe Gly Phe Gln Thr  
     1              5                 10                 15  
 Phe Ser Val Val Val Leu Gly Val Phe Phe Ala Ser Arg Gly Lys Ala  
     20                 25                 30  
 Trp Leu Thr Gly Trp Leu Ser Leu Leu Ser Ser Ile Met Asn Val Phe  
     35                 40                 45  
 Val Leu Lys Gln Ile His Leu Trp Gly Phe Glu Val Thr Ser Ala Asp  
     50                 55                 60  
 Val Tyr Val Ile Gly Leu Leu Thr Cys Leu Asn Tyr Ala Arg Glu His  
     65                 70                 75                 80

Tyr Glu Lys Asn Asp Ile Asn Asp Ala Met Leu Cys Ser Trp Ile  
                   85                   90                   95  
 Ser Ile Ala Phe Leu Val Leu Thr Gln Leu His Leu Phe Leu Ile Pro  
                   100               105                   110  
 Ser Pro Asn Asp Ser Ser Gln Glu His Phe Leu Ala Leu Phe Ser Ser  
                   115               120                   125  
 Thr Pro Arg Ile Val Val Ala Ser Leu Val Thr Leu Ile Phe Val Gln  
                   130               135                   140  
 Ile Val Asp Ile Lys Leu Phe Thr Phe Leu Gln Arg Val Phe Ser Lys  
                   145               150                   155                   160  
 Lys Tyr Phe Ala Met Arg Ser Thr Ile Ser Leu Leu Phe Ser Gln Leu  
                   165               170                   175  
 Ile Asp Thr Ile Ile Phe Ser Phe Leu Gly Leu Tyr Gly Leu Val Ser  
                   180               185                   190  
 Asn Leu Cys Asp Val Met Ile Phe Ala Met Leu Val Lys Gly Ile Val  
                   195               200                   205  
 Ile Thr Leu Ala Ile Pro Thr Leu Thr Val Thr Lys Ala Val Leu Asp  
                   210               215                   220  
 Arg Arg Ser Ser  
 225  
<210>1169  
<211>189  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1169

Leu Gly Ile Phe Cys Phe Lys Lys Ile Asn Leu Phe Lys Thr Phe Ile  
     1               5                   10                   15  
 Leu Met Asn Asn Asn Val Tyr Leu Phe Cys Phe Leu Ile Phe Leu Ser  
     20               25                   30  
 Lys Lys Val Phe Phe Glu Ser Tyr Glu Asp Phe Ala Asn Val Ala Ser  
     35               40                   45  
 Ser Trp Pro Lys Ser Leu Arg Ala Leu Val Gln Gly Arg Tyr Phe Val  
     50               55                   60  
 Asp Ser Glu Leu Lys Glu Thr Pro Tyr Arg Ile His Asp Phe Lys Lys  
     65               70                   75                   80  
 Thr Pro Ile His His Arg Leu Tyr Arg Ser Leu Pro Ile Ile Ser Thr  
     85               90                   95  
 Ile Gly Gly Ile Ile Arg Leu Ile Glu Ala His Ser Gly Pro Ile His  
     100               105                   110  
 Pro Arg Asp Lys Met Lys Tyr Arg Phe Glu Val Leu Gln Ala Val Ile  
     115               120                   125  
 Glu Ile Leu Gly Leu Gly Val Leu Ile Leu Val Phe Asp Ile Ile Gly  
     130               135                   140  
 Cys Phe Leu Ala Phe Leu Val Ala Ile Ile Leu Ser Leu Leu Leu Tyr  
     145               150                   155                   160  
 Cys Asn Ser Thr Phe Thr Cys Val Gln Asn Leu Ser Phe Thr Glu Arg  
     165               170                   175  
 Met Leu Glu Gly Ile Gly Glu Ala Val Asn Phe Leu Ala  
     180               185

<210>1170  
<211>92  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1170

Val Gly Leu Ser Tyr Trp Asp Ser Gly Phe Val Val Leu Ala Cys Lys  
     1               5                   10                   15  
 Val Leu Ala Thr Ala Leu Lys Phe Leu Phe Ser Lys Ala Ser Ser Lys  
     20               25                   30  
 Ile Lys Gln Met Lys Trp Arg Glu Lys Ala Arg Asn Leu Ala Ala Lys  
     35               40                   45  
 Asp Thr Val Gln Ser Ile Lys Glu Phe Cys Ser Val Asp Leu Thr Ser  
     50               55                   60  
 Cys Phe Thr Arg Cys Phe Arg Leu Arg Asn Arg Val Val Glu Glu Gly  
     65               70                   75                   80

Ala Ser Glu Asn      Thr Val Arg Glu Ile Ile Val  
                   85    90  
 <210>1171  
 <211>130  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1171  
 Met Val Asn Arg Tyr Lys Ser Ser Ala Glu Phe Ser Ala Asp His Tyr  
       1                  5                                  10                          15  
 Tyr Asp Asp Asn Leu Val Arg Met Gly Tyr Lys Arg Asn Leu Arg Gly  
       20                  25                                  30  
 Leu Ala Pro Val Glu Asn Glu Val Cys Leu Phe Glu Glu Asn Asn Leu  
       35                  40                                  45  
 Leu Glu Ser Val Met Ala Ser Ile Pro Ile Met Gly Ser Ile Leu Gly  
       50                  55                                  60  
 Leu Gly Arg Leu His Ser Val Trp Ser Thr Gln Asp Pro Lys Asp Ser  
       65                  70                                  75                          80  
 Lys Ile Ser Ile Ile Phe His Thr Ala Leu Gly Ile Leu Glu Thr Leu  
       85                  90                                  95  
 Gly Leu Gly Ile Ile Val Leu Leu Ile Lys Ile Thr Ile Thr Ile Leu  
       100                  105                                  110  
 Leu Ile Leu Phe Thr Pro Cys Leu Leu Cys Tyr Phe Met Tyr Ser Cys  
       115                  120                                  125  
 Cys Leu  
       130  
 <210>1172  
 <211>125  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1172  
 Met Thr Lys Asn Ala Ile Asn Ser Gln Thr Thr Pro Gln Pro Asn  
       1                  5                                  10                          15  
 Leu Thr Asp Ala Glu Pro Ile Ala Ser Arg Ala Gln Cys Lys Ser Ile  
       20                  25                                  30  
 Ala Val Ile Ile Ser Leu Phe Ala Leu Gly Met Leu Leu Leu Cys Leu  
       35                  40                                  45  
 Gly Ile Ile Leu Ile Ser Ile Pro Ile Pro Gly Leu Ala Ala Gln Val  
       50                  55                                  60  
 Ala Leu Gly Leu Gly Ile Val Ser Leu Ile Leu Gly Ile Ala Leu Ala  
       65                  70                                  75                          80  
 Asn Ile Gly Phe Leu Cys Leu Leu Leu Arg Cys Lys Gln Phe Pro Lys  
       85                  90                                  95  
 Asn Pro Ile His Cys Pro Leu Lys Ala Leu Asn Ser Leu Pro Arg Glu  
       100                  105                                  110  
 Ala Leu Pro Pro His Ser His Gly Lys Leu Glu Asn Phe  
       115                  120                                  125  
 <210>1173  
 <211>141  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1173  
 Leu Lys Glu Ile Met Met Ile Asn Phe Ile Arg Ser Tyr Ala Leu Tyr  
       1                  5                                  10                          15  
 Phe Ala Trp Ala Ile Ser Cys Ala Gly Thr Leu Ile Ser Ile Phe Tyr  
       20                  25                                  30  
 Ser Tyr Ile Leu Asn Val Glu Pro Cys Ile Leu Cys Tyr Tyr Gln Arg  
       35                  40                                  45  
 Ile Cys Leu Phe Pro Leu Thr Val Ile Leu Gly Ile Ser Ala Tyr Arg  
       50                  55                                  60  
 Glu Asp Ser Ser Ile Lys Leu Tyr Ile Leu Pro Gln Ala Val Leu Gly  
       65                  70                                  75                          80  
 Leu Gly Ile Ser Ile Tyr Gln Val Phe Leu Gln Glu Ile Pro Gly Met  
       85                  90                                  95  
 Gln Leu Asp Ile Cys Gly Arg Val Ser Cys Ser Thr Lys Ile Phe Leu

100	105	110
Phe Ser Tyr Val Thr Ile Pro Met Ala Ser Val Val Ala	Phe Gly Ala	
115	120	125
Ile Val Cys Leu Leu Val Leu Thr Lys Asn Tyr Arg Gly		
130	135	140
<210>1174		
<211>146		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1174		
Leu Xaa Ile Glu Gln Glu Asn Phe Ser Phe Lys Phe Lys Ser Ala		
1	5	10
Leu Ser Phe Thr Tyr Asn Thr Ala Asn Leu Thr Lys Ser Thr Phe Thr		
20	25	30
Phe Ile Leu Leu Leu Leu Arg Lys Lys Asp Gln Gly Leu Arg Phe		
35	40	45
Met Asp Lys Glu Thr Leu Glu Asn Ile Tyr Arg His Phe Arg Tyr Arg		
50	55	60
Phe Leu Lys Leu Asn Ile Leu Pro Ala Phe Leu Gly Leu Leu Leu		
65	70	75
Cys Ser Pro Asn Thr Leu Asn Tyr Thr Gln Val Asp Val Ile Phe Ser		
85	90	95
Asp Arg Leu Cys Ser Cys Leu Leu Ile Phe Leu Ala Ile Ala Ser Leu		
100	105	110
Thr Lys Arg Ser Leu Leu Trp Leu Gly Ala Pro Leu Gly Ile Trp Val		
115	120	125
Thr Leu Phe Ala Cys Val Ala Asp Asp Leu Leu Leu Phe Leu Gln Met		
130	135	140
Ile Leu		
145		
<210>1175		
<211>95		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1175		
Leu Leu Val Phe Val Lys Val Asn Ser Ser Met Gly Leu Pro Thr Phe		
1	5	10
Pro Xaa Xaa Phe Leu Asn Ile Cys Cys Trp Phe Ile Ile Val Leu Phe		
20	25	30
Ile Leu Ala Phe Ala Glu Ser Leu Arg His Leu Arg Trp Met Asn Leu		
35	40	45
Ile Phe Ser Ala Ala Ile Leu Phe Ser Pro Val Leu Phe His Ile Pro		
50	55	60
Val Glu Ser Pro Met Phe Leu Pro Ile Ile Val Thr Gly Leu Ile Leu		
65	70	75
Ile Ile Leu Ser Ile Gly Lys Arg Arg Arg Thr Lys Arg Lys Leu		
85	90	95
<210>1176		
<211>85		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1176		
Leu Val Tyr Phe Met Val Phe Ser Pro Ser Ser Glu Ser Val Val Lys		
1	5	10
Ala Asn Ser Val Val Arg Ser Asn Phe Cys Tyr Phe Leu Glu Asn Lys		
20	25	30
Phe Val Ser Pro Ser Glu Ser Thr Glu Val Met Phe Ser Glu Ile Met		
35	40	45
Lys Gly Arg Val Pro Asp Ile Glu Ser Leu Phe Asp Arg Pro Thr Asp		
50	55	60
Met Met Met Thr Gly Phe Lys Xaa Arg Arg Ile Trp Gly Ile Cys Ser		
65	70	75
Ile Ala Ser Glu Tyr		
85		

<210>1177  
 <211>114  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1177  
 Met Leu Tyr Pro Val Ile Ala Val Val Cys Ala Val Val Ser Val Val  
     1               5                 10                 15  
 Leu Leu Ile Leu Lys Val Leu Phe Leu Leu Ser Phe Pro Phe Lys  
     20              25                 30  
 Leu Cys Ser Ala Ser Ser Ala Leu Pro Gly Glu Arg Val Ser Leu Gly  
     35              40                 45  
 Ser His Phe Lys Cys Leu Tyr Gly Gly Leu Pro Tyr Leu Leu Ala  
     50              55                 60  
 Cys Leu Leu Ile Val Pro Val Ile Gly Thr Ala Ile His Gly Phe Ile  
     65              70                 75                 80  
 Ile Ser His Arg Thr Ser Glu Asp Ala Arg Leu Ser Ser Ala Ile Val  
     85              90                 95  
 Phe Met Gln Ala Pro Ile Leu Gln Leu Ala Gly Met Ser Gly Leu Ile  
     100             105                 110  
 Lys Pro

<210>1178  
 <211>79  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1178  
 Leu Phe Phe Tyr Ile Tyr Ser Ile Leu Lys Arg Tyr Ile Val Val Leu  
     1               5                 10                 15  
 Gly Lys Ile Leu Gly Leu Ile Thr Ile Gln Phe Tyr Gln Asn Leu Gly  
     20              25                 30  
 Gly Met Ser Ser Glu Arg Tyr Ser Ala Leu His Ser Arg Lys Ser Leu  
     35              40                 45  
 Ser Val Leu Pro His Val Val Arg Lys Val Leu Leu Ser Phe Pro Asp  
     50              55                 60  
 Phe Arg Gly Asn Gly Asp Val Asn Leu Arg Asn Ile Arg Ser Asp  
     65              70                 75  
 <210>1179  
 <211>163  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1179  
 Leu Lys Ala Lys Ala Tyr Leu Asp Lys Gly Ala Phe Val Pro Ser Asp  
     1               5                 10                 15  
 Phe Val Trp Glu Ile Leu Lys Glu Lys Leu Gln Ser Gln Ala Cys Ser  
     20              25                 30  
 Lys Gly Cys Ile Ile Asp Gly Phe Pro Arg Thr Leu Asp Gln Ala His  
     35              40                 45  
 Leu Leu Asp Ser Phe Leu Met Asp Val His Ser Asn Tyr Thr Val Ile  
     50              55                 60  
 Phe Leu Glu Ile Ser Glu Asp Glu Ile Leu Lys Arg Val Cys Ser Arg  
     65              70                 75                 80  
 Phe Leu Cys Pro Ser Cys Ser Arg Ile Tyr Asn Thr Ser Gln Gly His  
     85              90                 95  
 Thr Glu Cys Pro Asp Cys His Val Pro Leu Ile Arg Arg Ser Asp Asp  
     100             105                 110  
 Thr Pro Glu Ile Ile Lys Glu Arg Leu Thr Lys Tyr Gln Glu Arg Thr  
     115             120                 125  
 Ala Pro Val Ile Ala Tyr Tyr Asp Ser Leu Gly Lys Leu Cys Arg Val  
     130             135                 140  
 Ser Ser Glu Asn Lys Glu Asp Leu Val Phe Glu Asp Ile Leu Lys Cys  
     145             150                 155                 160  
 Ile Tyr Lys

<210>1180

<211>128  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1180

Met	Ser	Gln	Cys	Gln	Ser	Ser	Ser	Thr	Ser	Thr	Trp	Glu	Trp	Met	Lys
1					5				10					15	
Ser	Phe	Val	Pro	Asn	Trp	Lys	Asn	Pro	Thr	Pro	Pro	Leu	Ser	Pro	Ile
					20				25					30	
Pro	Ser	Glu	Asp	Glu	Phe	Ile	Leu	Ala	Tyr	Glu	Pro	Phe	Val	Leu	Pro
					35				40					45	
Lys	Thr	Asp	Pro	Glu	Asn	Ala	Gln	Ala	Asn	Pro	Pro	Gly	Thr	Ser	Thr
					50				55					60	
Pro	Asn	Val	Glu	Asn	Gly	Ile	Asp	Asp	Leu	Asn	Pro	Leu	Leu	Gly	Gln
					65				70					80	
Pro	Asn	Glu	Gln	Asn	Asn	Ala	Asn	Asn	Pro	Gly	Thr	Ser	Gly	Ser	Asn
					85				90					95	
Pro	Thr	Ser	Leu	Pro	Ala	Pro	Glu	Arg	Leu	Pro	Glu	Thr	Glu	Glu	Asn
					100				105					110	
Ser	Gln	Glu	Glu	Gln	Gly	Ser	Gln	Asn	Asn	Glu	Asp	Leu	Ile	Gly	
					115				120					125	

<210>1181  
<211>94  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1181

Leu	Lys	Ser	Met	Leu	Asp	Pro	Lys	Lys	His	Ser	Thr	Leu	Gly	Ile	Glu
1							5			10				15	
Ile	Ser	Ser	Glu	Thr	Ala	Glu	Thr	Ile	Glu	Ser	Cys	Ser	Leu	Gly	Leu
							20			25				30	
Ile	Ser	Ile	Asn	Leu	Leu	Leu	Ser	Gly	Leu	Cys	Leu	Arg	Ser	Ser	His
							35			40				45	
Asp	Arg	Ser	Gln	Ala	Val	Lys	Ile	Ile	Gln	Gln	Phe	Cys	Pro	Gln	Phe
							50			55				60	
Ser	Ser	Glu	Glu	Val	Gln	Asn	Phe	Val	Glu	Gln	Arg	Asn	Ile	Leu	Leu
							65			70				80	
His	Phe	Tyr	Ile	Ile	Cys	Leu	Lys	Gly	Thr	Lys	Ser	Pro	Cys		
							85			90					

<210>1182  
<211>314  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1182

Met	Asn	Lys	Lys	His	Ala	Ser	Phe	Ser	Ser	Arg	Leu	Gly	Phe	Ile	Phe
1							5			10				15	
Ser	Met	Ile	Gly	Ile	Ala	Val	Gly	Ala	Gly	Asn	Ile	Trp	Arg	Phe	Pro
							20			25				30	
Arg	Val	Ala	Ala	Gln	Asn	Gly	Gly	Ala	Phe	Leu	Ile	Leu	Trp	Leu	
							35			40				45	
Cys	Phe	Leu	Phe	Leu	Trp	Ser	Ile	Pro	Leu	Ile	Ile	Ile	Glu	Leu	Ser
							50			55				60	
Ile	Gly	Lys	Leu	Thr	Lys	Lys	Ala	Pro	Ile	Gly	Ala	Leu	Ile	Lys	Thr
							65			70				80	
Ala	Gly	Lys	Lys	Phe	Ala	Trp	Ala	Gly	Gly	Phe	Ile	Thr	Leu	Val	Thr
							85			90				95	
Thr	Cys	Ile	Leu	Ala	Tyr	Tyr	Ser	Thr	Ile	Val	Gly	Trp	Gly	Leu	Ser
							100			105				110	
Tyr	Phe	Tyr	Tyr	Ala	Val	Ser	Gly	Lys	Ile	His	Leu	Gly	Asn	Asp	Phe
							115			120				125	
Ala	Lys	Leu	Trp	Thr	Ser	His	Tyr	Gln	Ser	Ser	Ile	Pro	Leu	Trp	Ala
							130			135				140	
His	Leu	Thr	Ser	Leu	Gly	Leu	Ala	Tyr	Leu	Val	Ile	Arg	Lys	Gly	Ile
							145			150				160	
Val	His	Gly	Ile	Glu	Lys	Cys	Asn	Lys	Ile	Leu	Ile	Pro	Ala	Phe	Phe
							165			170				175	

Leu Cys Thr Ile      Leu Leu Leu Arg Ala Val Thr D Pro Gly Ala  
                   180                    185                    190  
 Val Gln Gly Ile Lys Gln Leu Phe Ser Cys Asp Lys Ser Cys Phe Ser  
                   195                    200                    205  
 Asn Tyr Lys Val Trp Ile Glu Ala Leu Thr Gln Asn Ala Trp Asp Thr  
                   210                    215                    220  
 Gly Ala Gly Trp Gly Leu Leu Val Tyr Ala Gly Phe Ala Ser Lys  
                   225                    230                    235                    240  
 Lys Thr Gly Val Val Ser Asn Gly Ala Leu Thr Ala Ile Cys Asn Asn  
                   245                    250                    255  
 Leu Val Ser Leu Ile Met Gly Asp His Tyr Leu Phe His Met Cys Phe  
                   260                    265                    270  
 Phe Arg His Phe Arg Asn His Ala Ala Thr Arg Trp Ser Arg Ser Xaa  
                   275                    280                    285  
 Lys His Arg Asp Tyr Leu Tyr Leu Pro Thr Arg Val Ile Tyr Pro Phe  
                   290                    295                    300  
 Ala Trp Arg Asn Leu Ser Asn His Pro Val  
                   305                    310

&lt;210&gt;1183

&lt;211&gt;132

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1183

Met Arg Ala Glu Met Ala Val Ile Tyr Trp Asp Arg Ser Lys Ile Val  
       1                    5                    10                    15  
 Trp Ser Phe Glu Pro Trp Ser Leu Arg Leu Thr Trp Tyr Gly Val Phe  
       20                    25                    30  
 Phe Thr Val Gly Ile Phe Leu Ala Cys Leu Ser Ala Arg Tyr Leu Ala  
       35                    40                    45  
 Leu Ser Tyr Tyr Gly Leu Lys Asp His Leu Ser Phe Ser Lys Ser Gln  
       50                    55                    60  
 Leu Arg Val Ala Leu Glu Asn Phe Phe Ile Tyr Ser Ile Leu Phe Ile  
       65                    70                    75                    80  
 Val Pro Gly Ala Arg Leu Ala Tyr Val Ile Phe Tyr Gly Trp Ser Phe  
       85                    90                    95  
 Tyr Leu Gln His Pro Glu Glu Ile Ile Gln Ile Trp His Gly Gly Leu  
       100                    105                    110  
 Ser Ser His Gly Gly Val Leu Trp Leu Ser Phe Val Gly Gly His Phe  
       115                    120                    125  
 Phe Leu Asp Ile  
       130

&lt;210&gt;1184

&lt;211&gt;171

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1184

Met Ser Val His Ile Thr Pro Arg Lys Cys Phe Ile Leu Cys Ile Leu  
       1                    5                    10                    15  
 Ser Met Phe Thr Leu Pro Thr Leu Phe Pro Lys Ala His Leu Ile Leu  
       20                    25                    30  
 Phe Ser Pro Tyr Ile Val Leu Cys Phe Tyr Cys Phe Ser Lys Asp Lys  
       35                    40                    45  
 Gly Leu Val Leu Ala Leu Gly Cys Gly Val Leu Ser Asp Leu Ala Leu  
       50                    55                    60  
 Gly Ser Arg Gly Val Phe Leu Leu Leu Tyr Pro Leu Thr Ala Leu Ile  
       65                    70                    75                    80  
 Thr His Lys Ala His Leu Ile Phe Ser Lys Glu Ser Lys Ala Ala Leu  
       85                    90                    95  
 Val Ile Val Asn Met Ile Phe Tyr Gly Val Phe Leu Leu Leu Thr Ile  
       100                    105                    110  
 Pro Met Cys Ala Leu Phe Gly His Glu Val Arg Trp Ser Ile Asp Val  
       115                    120                    125  
 Leu Met Ile Pro Leu Lys Cys Ser Phe Leu Asp Asn Leu Ile Phe Thr  
       130                    135                    140

Ser Val Ile Tyr Ile Leu Pro Cys Ala Ile Asn Ser Gly Ile His Lys  
 145 150 155 160

Met Ile Ser Phe Phe Arg Arg Leu Val Cys Tyr  
 165 170

<210>1185

<211>205

<212>PRT

<213>Chlamydia pneumoniae

<400>1185

Met Phe Met Lys Ile Cys Ser Leu Lys Leu Lys Asn Phe Arg Asn His  
 1 5 10 15

Ser Asp Leu Glu Ile Ser Leu Ala Pro Lys Leu Asn Tyr Ala Gln Gly  
 20 25 30

Lys Thr Asn Leu Leu Glu Ala Leu Tyr Val Leu Ser Leu Gly Arg Ser  
 35 40 45

Phe Arg Thr Gln His Leu Thr Asp Thr Ile Thr Phe Gly Ser Ser His  
 50 55 60

Phe Phe Leu Glu Thr Gln Phe Glu Lys Asp His Leu Pro Gln Ala Leu  
 65 70 75 80

Ser Ile Tyr Thr Asp Lys Gln Gly Lys Lys Ile Cys Tyr Asn Gln Leu  
 85 90 95

Pro Ile Lys Thr Leu Ser Gln Leu Ile Gly Lys Val Pro Ile Val Leu  
 100 105 110

Phe Ser Ser Lys Asp Arg Leu Leu Ile Ser Gly Ala Pro Ala Asp Arg  
 115 120 125

Arg Leu Phe Leu Asn Leu Leu Ser Gln Cys Asp Asn His Tyr Thr  
 130 135 140

Leu Cys Leu Ser Tyr Tyr His Arg Ala Leu Gln Gln Arg Asn Ala Leu  
 145 150 155 160

Leu Lys Ser Lys Gln Thr Ser Thr Val Ala Ser Gly Met Asn Ser Trp  
 165 170 175

Ser Asn Thr Ala Pro Thr Tyr Pro Ser Asn Gly Phe Ser Val Val Arg  
 180 185 190

Asn Phe Gln Ile Tyr Pro Lys Asn Phe Gly Leu Thr Thr  
 195 200 205

<210>1186

<211>81

<212>PRT

<213>Chlamydia pneumoniae

<400>1186

Leu Arg Phe Arg Asn Ile Lys Lys Ser Leu Ile Phe Ile Lys Arg Ile  
 1 5 10 15

Arg Tyr Ser Gln Ser Gly Lys Glu Gln Lys Gly Ala Arg Pro Phe Phe  
 20 25 30

Lys Lys Ser Ile Thr Ser Ser Leu Val Ile Leu Leu Glu Ala Ile  
 35 40 45

Phe Asn Glu Asn Phe Ser Ser Ile Ile Gln Asn Asn Phe Asn Lys Asn  
 50 55 60

Phe Lys Asn Lys Asn Ile Ser Ile Asn Arg Ile Phe Val Lys Phe Thr  
 65 70 75 80

Ile

<210>1187

<211>79

<212>PRT

<213>Chlamydia pneumoniae

<400>1187

Val Gln Leu Phe Gln Tyr Met Asn Glu Ser Gly Trp Asp Trp Leu Cys  
 1 5 10 15

Asp Phe Asp Ser Gln Gly Glu Gly Phe Gln Leu Ser Arg Leu Val Gly  
 20 25 30

Leu Leu His Ser Ser Trp Ala Leu Tyr Glu Ala Lys Glu Gln Phe Tyr  
 35 40 45

Leu Pro Glu Val Ser Leu Leu Thr Trp Glu Glu Leu Ile Glu Met Gln

50	55	60
Phe Val Lys Gln Thr Asn Lys Thr Arg Gly Cys Lys Arg Ser Leu		
65	70	75

<210>1188  
<211>119  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1188

Met Pro Val Ser Ser Ala Pro Leu Pro Thr Ser His Arg Pro Ser Ser			
1	5	10	15
Gly Asn Leu Gly Leu Met Glu Pro Asn Ser Lys Ala Leu Lys Ala Lys			
20	25	30	
His Gln Asp Lys Thr Thr Lys Thr Ile Lys Leu Leu Val Lys Ile Leu			
35	40	45	
Val Ala Ile Leu Val Ile Glu Val Leu Gly Ile Ile Ala Ala Phe Phe			
50	55	60	
Ile Pro Gly Thr Pro Pro Ile Cys Leu Ile Ile Leu Gly Gly Leu Ile			
65	70	75	80
Leu Thr Thr Val Leu Cys Val Leu Leu Val Ile Lys Leu Ala Leu			
85	90	95	
Val Asn Lys Thr Glu Gly Thr Thr Ala Glu Gln Gln Ile Lys Arg Lys			
100	105	110	
Leu Ser Ser Lys Ser Ile Ser			
115			

<210>1189  
<211>105  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1189

Met Ser Ser Pro Val Val Thr Gly Thr Ser Ser Ala Ser Pro Val Glu			
1	5	10	15
Gln Thr Lys Leu Gly Glu Phe Leu Glu Arg Leu Ser Gly Ser Gly Arg			
20	25	30	
Cys Ile Lys Ile Ala Phe Ala Ala Ser Thr Ala Leu Leu Leu Leu Asn			
35	40	45	
Thr Phe Val Ser Gly Ile Val Ala Ile Ala Met Ile Phe Val Ala Thr			
50	55	60	
Ser Val Gly Ala Tyr Phe Thr Val Ile Gly Pro Leu Phe Leu Leu Ser			
65	70	75	80
Leu Ile Leu Leu Ala Ile Met Leu Ile Ser Met Tyr Lys Ile Thr His			
85	90	95	
Pro Ser Gln Asn Thr Pro Ile Ser Asn			
100	105		

<210>1190  
<211>162  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1190

Met Leu Cys Thr Cys Ser Arg Ile Gln Asp Gly Asn Pro Trp Met Lys			
1	5	10	15
Ser Glu Arg Leu Lys Lys Leu Glu Ser Glu Leu His Asp Leu Thr Gln			
20	25	30	
Trp Met Gln Leu Gly Leu Val Pro Lys Lys Glu Ile Ser Arg His Gln			
35	40	45	
Glu Glu Ile Arg Ile Leu Glu His Lys Ile Tyr Glu Glu Lys Glu Arg			
50	55	60	
Leu Gln Leu Leu Lys Glu Asn Gly Glu Ile Glu Glu Tyr Val Thr Pro			
65	70	75	80
Arg Arg Ser Pro Ala Lys Thr Val Tyr Pro Asp Gly Pro Ser Met Ser			
85	90	95	
Asp Ile Glu Phe Val Glu Pro Thr Glu Thr Glu Ile Asp Ile Asp Pro			
100	105	110	
Gly Glu Thr Val Glu Leu Glu Leu Thr Asp Glu Gly Arg Glu Asp Gly			
115	120	125	

Ala Val Glu Val Asp Tyr Ser His Glu Asp Asp Glu Asp Pro Leu Ser  
 130 135 140  
 Asp Arg Asn Arg Trp Arg Arg Gly Gly Ile Ile Asp Pro Asp Ala Asn  
 145 150 155 160  
 Glu Trp

&lt;210&gt;1191

&lt;211&gt;83

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1191

Leu Val Ile Gln Ile Gly Val Leu Pro Pro Leu Val Ala Thr Lys Lys  
 1 5 10 15  
 Ile Asp Ile Asn Arg Phe Met Gln Asp Ala Asp Asn Trp Ile Pro Met  
 20 25 30  
 Phe Ser His Pro Phe Phe Leu Arg Glu Lys Thr Leu Ser Asp Gly Lys  
 35 40 45  
 Asp Ile His Ile Leu Ser Arg Leu Lys Gly Leu Gln Thr Cys Ala Pro  
 50 55 60  
 Cys Ser Pro His Glu Glu Arg Thr Ile Thr Leu Leu Ser His Ser Asn  
 65 70 75 80  
 Ser Val Ser

&lt;210&gt;1192

&lt;211&gt;95

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1192

Met Asn Lys Ser Arg Phe Leu Arg Leu Cys Cys Cys Leu Cys Phe Cys  
 1 5 10 15  
 Gly Ser Leu Phe Tyr Phe Tyr Ile Asn Lys Gln Asn Ser Leu Thr Lys  
 20 25 30  
 Leu Arg Leu Glu Ile Pro Cys Leu Ser Val Arg Leu Arg Gln Leu Glu  
 35 40 45  
 Gln Gln Asn Ile Ser Leu Arg Phe Leu Ile Asp Lys Ile Glu Arg Pro  
 50 55 60  
 Asp His Leu Met Glu Ile Ala Ala Leu Pro Glu Tyr Gln Tyr Leu Glu  
 65 70 75 80  
 Tyr Pro Ser Glu Glu Ser Ile Ser Leu Leu Ser Tyr Glu Leu Pro  
 85 90 95

&lt;210&gt;1193

&lt;211&gt;101

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1193

Met Asp Pro Ala Ser Pro Val Ala Pro His Val Leu Gln Asp His Val  
 1 5 10 15  
 Gln Leu Ser Ser Glu Glu Leu Ser Ala Leu Ser Ser Gly Val Ser Arg  
 20 25 30  
 Val Lys Lys Leu Thr Ile Ala Ile Met Val Leu Ser Leu Ile Ala Ile  
 35 40 45  
 Ser Leu Val Ala Cys Gly Leu Phe Leu Thr Gly Ser Ala Pro Leu Gln  
 50 55 60  
 Leu Ser Ile Trp Ile Ala Ala Ser Cys Ile Thr Leu Ser Met Leu Val  
 65 70 75 80  
 Cys Ala Cys Trp Arg Tyr Lys Ile Ser Asn Ala Leu Glu Lys Thr Lys  
 85 90 95  
 Val Ala His Glu Ser  
 100

&lt;210&gt;1194

&lt;211&gt;77

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1194

Val Met Trp Tyr S Asp Tyr His Val Trp Ile Leu Pro Val His Glu  
 1 5 10 15  
 Arg Val Val Arg Leu Gly Leu Thr Glu Lys Met Gln Lys Asn Leu Gly  
 20 25 30  
 Ala Ile Leu His Val Asp Leu Pro Ser Val Gly Ser Leu Cys Lys Glu  
 35 40 45  
 Gly Glu Val Leu Val Ile Leu Glu Ser Ser Lys Ser Ala Ile Arg Gly  
 50 55 60  
 Val Lys Ser Cys Ile Arg Arg Gly Tyr Arg Tyr Gln Pro  
 65 70 75

&lt;210&gt;1195

&lt;211&gt;172

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1195

Met Gly Phe Lys Asn Ile Cys Lys Gln Gly Ser Gln Leu Tyr Leu Asn  
 1 5 10 15  
 Gly Ile Phe Pro Glu Arg Ile Leu Ala Arg Lys Leu Lys Asn Cys Ala  
 20 25 30  
 Lys Ser Tyr Pro Arg Thr Ala Leu Thr Ile Glu Val Leu Val Ser Ser  
 35 40 45  
 Val Leu Gly Ala Leu Lys Val Ile Leu Ile Pro Cys Ala Ser Thr Tyr  
 50 55 60  
 Ala Ala Leu Thr Leu Pro Leu Arg Ala Leu Phe Asn Ala Ile Lys Thr  
 65 70 75 80  
 Lys Ser Cys Gln His Leu Ala Ser Tyr Ala Met Ala Trp Leu Leu His  
 85 90 95  
 Ile Leu Thr Ile Ala Val Ile Ile Gly Leu Val Phe Ser Leu Val Phe  
 100 105 110  
 Ile Pro Pro Pro Val Val Phe Ile Ser Leu Gly Leu Leu Met Ser Val  
 115 120 125  
 Thr Thr Ser Val Thr Leu Phe Gln Val His Lys Asn Leu Phe Pro Pro  
 130 135 140  
 Tyr Glu Pro Pro Pro Ser Arg Pro His Thr Pro Pro Pro Phe Ala Asp  
 145 150 155 160  
 Glu Tyr Val Pro Leu Ile Ser Glu Ser Tyr Phe Asp  
 165 170

&lt;210&gt;1196

&lt;211&gt;224

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1196

Val Thr Pro Ser Ala Asp Asp Ala Lys Ile Ala Val Glu Lys Lys  
 1 5 10 15  
 Lys Asp Leu Ser Ala Ser Ala Arg Met Glu Glu His Glu Ala Ser Gln  
 20 25 30  
 Arg Gln Asp Ala Arg His Arg Arg Ile Gly Arg Glu Ala Gln Gly Ser  
 35 40 45  
 Phe Phe Tyr Ser Ser Arg Asn Pro Glu His Arg Arg Ser Phe Gly Ser  
 50 55 60  
 Leu Ser Arg Phe Lys Thr Lys Pro Ser Asp Ala Ala Ser Thr Arg Pro  
 65 70 75 80  
 Ala Ser Ile Ser Pro Pro Phe Lys Asp Asp Phe Gln Pro Tyr His Phe  
 85 90 95  
 Lys Asp Leu Arg Ser Ser Ser Phe Gly Ser Gly Ala Ser Ser Ala Phe  
 100 105 110  
 Thr Pro Ile Met Pro Ala Ser Ser Arg Ser Pro Asn Phe Ser Thr Gly  
 115 120 125  
 Thr Val Leu His Pro Glu Pro Val Tyr Pro Lys Gly Gly Lys Glu Pro  
 130 135 140  
 Ser Ile Pro Arg Val Ser Ser Ser Ser Arg Arg Ser Pro Arg Asp Arg  
 145 150 155 160  
 Gln Asp Lys Gln Gln Gln Gln Asn Gln Asp Glu Glu Gln Lys Gln  
 165 170 175

Gln Ser Lys Lys Ser Gly Lys Ser Asn Gln Ser Leu Lys Thr Pro  
       180                 185                 190  
 Pro Pro Asp Gly Lys Ser Thr Ala Asn Leu Ser Pro Ser Asn Pro Phe  
       195                 200                 205  
 Ser Asp Gly Tyr Asp Glu Arg Glu Lys Arg Lys His Arg Lys Asn Lys  
       210                 215                 220  
 <210>1197  
 <211>139  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1197  
 Leu Ile Lys Lys Arg Ala Ile Phe Glu Arg Met Phe Pro Ile Pro Pro  
       1                  5                 10                 15  
 Pro His Cys Pro Pro Asn Asn Lys Asn Asn Phe Tyr His Leu Thr Thr  
       20                 25                 30  
 Asp Thr Lys Asp Pro Leu Leu Leu Arg Ile Leu Arg Thr Ile Gly Tyr  
       35                 40                 45  
 Val Leu Leu His Ile Ile Thr Leu Gly Leu Leu Leu Leu Ile His Tyr  
       50                 55                 60  
 Tyr Lys His His Arg Val Val Arg Lys Glu Gly Leu Pro Thr Pro Pro  
       65                 70                 75                 80  
 Thr Leu Pro Lys Gly Pro Glu Pro Lys Thr Ile Glu Ile Ala Lys Gln  
       85                 90                 95  
 Pro Pro Lys Asp Gly Glu Asp Lys Lys Pro Asp Val Pro Lys Pro Gly  
       100                105                110  
 Thr Pro Pro Pro Glu Asp Thr Pro Pro Pro Pro Lys Ala Pro Ser  
       115                120                125  
 Pro Ala Ser Pro Lys Val Pro Lys Thr Thr Cys  
       130                135  
 <210>1198  
 <211>79  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1198  
 Val Val Glu Ser Ala Phe Tyr Gln Gln Val Val Leu Gly Thr Phe Gly  
       1                  5                 10                 15  
 Leu Ala Gly Glu Gly Ala Leu Gly Gly Gly Gly Val Ser Ser Gly  
       20                 25                 30  
 Gly Gly Val Pro Gly Leu Gly Thr Ser Gly Phe Leu Ser Ser Pro Ser  
       35                 40                 45  
 Leu Gly Gly Cys Leu Ala Ile Ser Ile Val Phe Gly Ser Gly Pro Leu  
       50                 55                 60  
 Gly Arg Val Gly Gly Val Gly Lys Pro Ser Phe Leu Thr Thr Arg  
       65                 70                 75  
 <210>1199  
 <211>90  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1199  
 Leu Asp Asp Ser Trp Ile Leu Glu Val Lys Val Thr Pro Lys Ala Lys  
       1                  5                 10                 15  
 Glu Asn Lys Ile Val Gly Phe Asp Gly Gln Ala Leu Lys Val Arg Val  
       20                 25                 30  
 Thr Glu Pro Pro Glu Lys Gly Lys Ala Asn Asp Ala Val Ile Ser Leu  
       35                 40                 45  
 Leu Ala Lys Ala Leu Ser Leu Pro Lys Arg Asp Val Thr Leu Ile Ala  
       50                 55                 60  
 Gly Glu Thr Ser Arg Lys Lys Lys Phe Leu Leu Pro Asn Arg Val Gln  
       65                 70                 75                 80  
 Asp Ile Ile Phe Ser Leu His Ile Asp Val  
       85                 90  
 <210>1200  
 <211>107  
 <212>PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1200

Leu	Gln	Asn	Ser	Met	His	Lys	Val	Phe	Ala	Asp	Pro	Ser	Leu	Thr	Asp
1															15
Thr	Ile	Thr	Leu	Pro	Ile	Asp	Ala	Pro	Gly	Asp	Pro	Ala	Tyr	Pro	His
															30
Val	Leu	Gly	Glu	Ala	Phe	Ile	Ser	Pro	Gln	Ala	Ala	Leu	Arg	Phe	Leu
															45
Glu	Asn	Thr	Ser	Pro	Asn	Gln	Glu	Asp	Ile	Tyr	Glu	Glu	Ile	Ser	Arg
															50
															60
Tyr	Leu	Val	His	Ser	Ile	Leu	His	Met	Leu	Gly	Tyr	Asp	Asp	Thr	Ser
															80
Ser	Glu	Glu	Lys	Arg	Lys	Met	Arg	Val	Lys	Glu	Asn	Gln	Ile	Leu	Cys
															85
															95
Met	Leu	Arg	Lys	Lys	His	Ala	Leu	Leu	Thr	Ala					
															100
															105

&lt;210&gt;1201

&lt;211&gt;279

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1201

Met	Ser	Ser	Leu	Leu	Ser	Cys	Gly	Arg	Ile	Glu	Pro	Thr	Arg	Val	Thr
1															15
Cys	Ser	Leu	Lys	Thr	Tyr	Leu	Glu	Asp	Thr	Ser	Gln	Asn	Gln	Leu	Ser
															20
															30
Thr	Arg	Leu	Val	Arg	Ala	Ser	Val	Ile	Phe	Leu	Cys	Ala	Leu	Leu	Ile
															35
															45
Ile	Leu	Val	Cys	Val	Ala	Leu	Ser	Ser	Leu	Ile	Pro	Ser	Ile	Met	Ala
															50
															55
															60
Leu	Ala	Thr	Ser	Phe	Thr	Val	Met	Gly	Leu	Ile	Leu	Phe	Val	Met	Ser
															65
															70
															75
Leu	Leu	Gly	Asp	Val	Ala	Ile	Ile	Ser	Tyr	Leu	Thr	Tyr	Ser	Thr	Val
															85
															90
															95
Thr	Ser	Tyr	Arg	Gln	Asn	Lys	Arg	Ala	Phe	Glu	Ile	His	Lys	Pro	Ala
															100
															105
															110
Arg	Ser	Val	Tyr	Tyr	Glu	Gly	Val	Arg	His	Trp	Asp	Leu	Gly	Arg	Ser
															115
															120
															125
Ser	Leu	Gly	Thr	Gly	Glu	Ile	Pro	Ile	Val	Arg	Thr	Leu	Phe	Ser	Pro
															130
															135
															140
Phe	Gln	Asn	His	Gly	Leu	Asn	His	Ala	Leu	Ala	Ala	Lys	Ile	Phe	Leu
															145
															150
															155
Phe	Met	Glu	His	Phe	Ser	Pro	Glu	Pro	Pro	Asn	Glu	Pro	Leu	Val	Asp
															165
															170
															175
Trp	Ala	Cys	Leu	Ile	Arg	Asp	Phe	Arg	Pro	His	Val	Ser	Ser	Leu	Cys
															180
															185
															190
Phe	Val	Ile	Glu	Lys	Gln	Gly	Ser	Ser	Leu	Arg	Thr	Lys	Glu	Gly	Asn
															195
															200
															205
Thr	Ile	Cys	Glu	Ala	Phe	Arg	Ser	Asp	Tyr	Asp	Ala	His	Phe	Ala	Met
															210
															215
															220
Val	Asp	Cys	Tyr	Arg	Leu	Ile	His	Ser	Lys	Leu	Ile	Glu	Lys	Met	
															225
															230
															235
Gly	Leu	Lys	Asn	Ile	Asp	Ile	Ile	Pro	Ser	Val	Met	Val	Arg	Glu	Asp
															245
															250
															255
Tyr	Pro	Ser	Arg	Pro	Gly	Glu	Gly	Tyr	Arg	Glu	Gly	Leu	Leu	Arg	Met
															260
															265
															270
Tyr	Gly	Gly	Lys	Gly	Ala	Leu									275

&lt;210&gt;1202

&lt;211&gt;239

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1202

Leu	Lys	Val	Gln	Lys	Leu	Arg	Gln	Pro	Ser	Phe	Tyr	Pro	Lys	Arg	Leu
1															15

Met Thr Leu Tyr Leu G~~L~~ Leu Asn Gln Lys Thr Ala Arg Ly~~S~~ Tyr Gln  
           20                     25                     30  
 Ala His Tyr Leu Pro Ile Leu Thr Leu Phe Pro Tyr Ala Lys Ser Thr  
           35                     40                     45  
 Pro Gln Asn Lys Arg Ala Leu Gln Phe Leu Pro Gln Ala Thr His Val  
           50                     55                     60  
 Ile Leu Thr Ser Pro Ser Ser Thr His Leu Phe Leu Ser Arg Met Thr  
           65                     70                     75                     80  
 Ser Leu Leu Ser Lys Ala Thr Leu Lys Thr Lys Thr Tyr Leu Cys Ile  
           85                     90                     95  
 Gly Glu Ser Thr Lys Glu Arg Leu Leu Ser Phe Leu Gly Gln Val Lys  
           100                    105                     110  
 Tyr Val Val Ala Thr Gln Glu Ile Ala Glu Gly Ile Phe Pro Leu Leu  
           115                    120                     125  
 Gln Ala Leu Pro Ser Ser Ala Arg Ile Leu Tyr Pro His Ser Ser Leu  
           130                    135                     140  
 Ala Arg Pro Val Ile Arg Glu Phe Leu Tyr Asn Arg Phe Thr Phe Phe  
           145                    150                     155                     160  
 Ser Tyr Pro His Tyr Thr Val Lys Pro Arg Lys Leu Lys Lys Asn Ile  
           165                    170                     175  
 Leu Ser Lys Tyr Lys Ile Ile Phe Thr Ser Pro Ser Thr Val Arg  
           180                    185                     190  
 Ala Phe Ala Lys Ile Phe Pro Arg Phe Pro Glu Lys Thr Tyr Trp Cys  
           195                    200                     205  
 Gln Gly Arg Met Thr Leu Gln Glu Phe Gln Lys Phe Ser Ser Gln Lys  
           210                    215                     220  
 Gln Val Ser Leu Leu Glu Thr Leu Gly Lys Ser Arg Thr Ser Pro  
           225                    230                     235  
<210>1203  
<211>110  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1203  
 Met Ala Ser Ser Ala Thr Pro Gly Phe Asp Gly Thr Ala Pro Ser Leu  
   1                     5                     10                     15  
 Phe Pro Pro Ala Thr Arg Pro Arg Tyr Asn Phe Lys Leu Ala Leu Phe  
   20                    25                     30  
 Val Thr Ile Ala Ile Ala Leu Val Trp Ile Ala Leu Ile Ala Thr Thr  
   35                    40                     45  
 Ile Ala Ile Gly Leu Cys Ile His Pro Leu Cys Ser Phe Ile Phe Leu  
   50                    55                     60  
 Thr Ala Ile Pro Leu Tyr Phe Ile Ser Arg Tyr Ile Cys Ser His Tyr  
   65                    70                     75                     80  
 Ala Arg Asn Val Tyr Ile Ala Leu Asp Val Val Pro Asp His Ser Lys  
   85                    90                     95  
 Leu Gln Asp Met Arg Ser His Ser Pro Ile Phe Ser Asp Arg  
   100                   105                     110  
<210>1204  
<211>196  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1204  
 Met Leu Ile Leu Gly Leu Leu Thr Pro Thr Phe Gly Ser Leu Lys Thr  
   1                     5                     10                     15  
 Phe Pro Ser His Ser Ala Gly Lys Gln Thr His Ser Met Ile Gly Trp  
   20                    25                     30  
 Val Pro Gln His Phe Ser Tyr Asp Pro Cys Phe Pro Ile Ser Val Lys  
   35                    40                     45  
 Asp Val Val Leu Ser Gly Arg Leu Ser Gln Leu Ser Trp His Xaa Lys  
   50                    55                     60  
 Tyr Lys Xaa Lys Asp Phe Glu Ala Val Asp His Ala Leu Asp Asn Val  
   65                    70                     75                     80  
 Gly Leu Ser Asp His His His Cys Phe Ala His Leu Ser Gly Gly  
   85                    90                     95

Gln Ile Gln Arg V eu Leu Ala Arg Ala Leu Ala Ser Tyr Pro Glu  
     100                 105                 110  
 Ile Leu Ile Leu Asp Glu Pro Thr Thr Asn Ile Asp Pro Asp Asn Gln  
     115                 120                 125  
 Gln Arg Ile Leu Ser Ile Leu Lys Lys Leu Asn Arg Thr Cys Thr Ile  
     130                 135                 140  
 Leu Met Val Thr His Asp Leu His His Thr Thr Asn Tyr Phe Asn Lys  
     145                 150                 155                 160  
 Val Phe Tyr Met Asn Lys Thr Leu Thr Ser Leu Ala Asp Thr Ser Thr  
     165                 170                 175  
 Leu Thr Asp Gln Phe Cys Cys His Pro Tyr Lys Asn Gln Glu Phe Ser  
     180                 185                 190  
 Cys Ser Pro His  
     195

&lt;210&gt;1205

&lt;211&gt;92

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1205

Met Leu Ser Ser Leu Ile Arg Asp Ser Phe Pro Leu Leu Ile Leu Leu  
     1                 5                 10                 15  
 Pro Thr Phe Leu Ala Ala Leu Gly Ala Ser Val Ala Gly Gly Val Met  
     20                 25                 30  
 Gly Thr Tyr Ile Val Val Lys Arg Ile Val Ser Ile Ser Gly Ser Ile  
     35                 40                 45  
 Ser His Ala Ile Leu Gly Gly Ile Gly Leu Thr Leu Trp Ile Gln Tyr  
     50                 55                 60  
 Lys Leu His Leu Ser Phe Phe Pro Met Tyr Gly Ala Ile Val Gly Ala  
     65                 70                 75                 80  
 Ile Phe Leu Ala Leu Cys Ile Gly Lys Arg Ser Thr  
     85                 90

&lt;210&gt;1206

&lt;211&gt;188

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1206

Leu His Arg Gln Lys Ile His Leu Lys Tyr Gln Glu Arg Glu Asp Ser  
     1                 5                 10                 15  
 Leu Ile Ala Met Ile Trp Ser Val Gly Met Ala Ile Gly Ile Ile Phe  
     20                 25                 30  
 Ile Ser Arg Leu Pro Thr Phe Asn Gly Glu Leu Ile Asn Phe Leu Phe  
     35                 40                 45  
 Gly Asn Ile Leu Trp Val Thr Pro Ser Asp Leu Tyr Ser Leu Xaa Ile  
     50                 55                 60  
 Phe Asp Leu Leu Val Leu Gly Ile Val Val Leu Cys His Thr Arg Phe  
     65                 70                 75                 80  
 Leu Ala Leu Cys Phe Asp Glu Arg Tyr Thr Ala Leu Asn His Cys Ser  
     85                 90                 95  
 Val Gln Leu Trp Tyr Phe Leu Leu Leu Val Leu Thr Ala Ile Thr Ile  
     100                 105                 110  
 Val Met Leu Ile Tyr Val Met Gly Thr Ile Leu Met Leu Ser Met Leu  
     115                 120                 125  
 Val Leu Pro Val Ala Ile Ala Cys Arg Phe Ser Tyr Lys Met Thr Arg  
     130                 135                 140  
 Ile Met Phe Ile Ser Val Leu Leu Asn Ile Leu Cys Ser Phe Ser Gly  
     145                 150                 155                 160  
 Ile Cys Ile Ala Tyr Cys Leu Asp Phe Pro Val Gly Pro Thr Ile Ser  
     165                 170                 175  
 Leu Leu Met Gly Leu Xaa Tyr Thr Ala Ser Leu Val  
     180                 185

&lt;210&gt;1207

&lt;211&gt;112

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1207

Val	Phe	Ser	Tyr	Leu	Leu	Leu	Cys	Ile	Ile	Leu	Val	Tyr	Val	Arg	Phe
1				5					10					15	
Met	Tyr	Glu	Gly	Lys	Ser	Arg	Met	Ala	Ser	Pro	Thr	Pro	Gly	Gln	Leu
				20				25					30		
His	Leu	Gln	Gln	Lys	Val	Glu	Ser	Lys	Ala	Tyr	Asp	Tyr	Ser	Arg	Ser
				35				40					45		
Leu	Ala	Met	Ile	Ala	Thr	Ala	Leu	Leu	Phe	Phe	Ile	Val	Ala	Leu	Ile
				50				55				60			
Leu	Ser	Gly	Leu	Ser	Leu	Leu	Pro	Gln	Val	Phe	Leu	Pro	Phe	Ser	Gly
				65				70			75		80		
Ala	Tyr	Phe	Ile	Ile	Gly	Ser	Phe	Leu	Ala	Phe	Ile	Ala	Leu	Gly	Ile
				85				90				95			
Leu	Leu	Ile	Asn	Cys	Val	Cys	Asp	Leu	Lys	Gln	Tyr	Leu	Thr	Ser	Ser
				100				105				110			

&lt;210&gt;1208

&lt;211&gt;320

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1208

Val	Leu	Ile	Ser	Ile	Ser	Leu	Ala	Thr	Leu	Pro	Ile	Leu	Ala	Phe	Ser
1						5			10				15		
Trp	Ala	Ser	Phe	Ile	Glu	Pro	Asn	Trp	Leu	Arg	Thr	Thr	Ala	Ile	Pro
						20			25				30		
Trp	Arg	Leu	Pro	Lys	Lys	His	Ala	His	Leu	His	Gly	Leu	Arg	Ile	Ala
				35				40			45				
Gln	Ile	Ser	Asp	Leu	His	Phe	His	Lys	Arg	Val	Pro	Glu	Lys	Phe	Leu
				50				55			60				
Asn	Lys	Val	Ser	Lys	Ser	Ile	Lys	Asn	Phe	Ser	Pro	Asp	Leu	Ile	Val
				65				70			75		80		
Phe	Cys	Gly	Asp	Leu	Leu	Cys	Arg	Ala	Arg	Leu	Glu	Asp	Lys	Glu	Arg
						85			90			95			
Leu	Glu	Thr	Phe	Leu	Asn	Thr	Leu	Glu	Ala	Pro	Leu	Gly	Val	Phe	Ala
						100			105			110			
Ile	Leu	Gly	Asn	His	Asp	Tyr	Ser	Ser	Tyr	Ile	Ser	Arg	Asn	Thr	Lys
				115				120			125				
Gly	Glu	Ile	Thr	Cys	Ile	Pro	Glu	Glu	Lys	Ser	Arg	Pro	Ile	Gln	Arg
				130				135			140				
Ala	Ile	Ile	Ala	Val	Met	Gln	Gly	Leu	Phe	Ser	Ser	Pro	Ser	Tyr	Arg
				145				150			155		160		
Tyr	Asp	Pro	Asn	Leu	Thr	Pro	Gln	Glu	Pro	His	Pro	Asp	Leu	Lys	
						165			170			175			
Leu	Leu	Lys	Asn	Thr	Pro	Leu	Thr	Leu	Leu	His	Asn	Thr	Thr	His	Val
				180				185			190				
Ile	Pro	Asn	Thr	Leu	Asn	Ile	Val	Gly	Leu	Gly	Asp	Leu	Phe	Ala	Arg
				195				200			205				
Gln	Phe	His	Pro	Glu	Gln	Ala	Phe	Lys	Asn	Tyr	Asp	Pro	Ser	Leu	Pro
				210				215			220				
Gly	Leu	Leu	Leu	Ser	His	Asn	Pro	Asp	Gly	Ile	Thr	Arg	Leu	Gln	Gln
				225				230			235		240		
Tyr	Pro	Gly	Asp	Phe	Val	Leu	Ser	Gly	His	Ser	His	Gly	Pro	Gln	Val
						245			250			255			
Thr	Leu	Ser	Trp	Pro	Lys	Phe	Ala	Arg	Lys	Phe	Phe	Glu	Arg	Leu	Ser
				260				265			270				
Gly	Leu	Glu	Asn	Pro	Tyr	Leu	Ala	Arg	Gly	Tyr	Phe	Val	Thr	Lys	Glu
				275				280			285				
Gly	Lys	Gln	Leu	Tyr	Val	Asn	Arg	Gly	Leu	Gly	Gly	Leu	Lys	Arg	Ile
				290				295			300				
Arg	Phe	Cys	Ser	Pro	Pro	Glu	Ile	Cys	Tyr	Ile	Thr	Cys	Ser	Tyr	Asp
				305				310			315		320		

&lt;210&gt;1209

&lt;211&gt;185

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

<400>1209  
 Met Thr Ala Thr Met Ser Leu Leu Asn Leu Pro Ser Ser Gln Asp Ser  
   1               5               10               15  
 Ala Ser Glu Asp Ser Thr Ser Gln Ser Gln Ile Phe Asp Pro Ile Arg  
   20              25              30  
 Asn Arg Glu Leu Val Ser Thr Pro Glu Glu Lys Val Arg Gln Arg Leu  
   35              40              45  
 Leu Ser Phe Leu Met His Lys Leu Asn Tyr Pro Lys Lys Leu Ile Ile  
   50              55              60  
 Ile Glu Lys Glu Leu Lys Thr Leu Phe Pro Leu Leu Met Arg Lys Gly  
   65              70              75              80  
 Thr Leu Ile Pro Lys Arg Arg Pro Asp Ile Leu Ile Ile Thr Pro Pro  
   85              90              95  
 Thr Tyr Thr Asp Ala Gln Gly Asn Thr His Asn Leu Gly Asp Pro Lys  
  100             105             110  
 Pro Leu Leu Leu Ile Glu Cys Lys Ala Leu Ala Val Asn Gln Asn Ala  
  115             120             125  
 Leu Lys Gln Leu Leu Ser Tyr Asn Tyr Ser Ile Gly Ala Thr Cys Ile  
  130             135             140  
 Ala Met Ala Gly Lys His Ser Gln Val Ser Ala Leu Phe Asn Pro Lys  
 145             150             155             160  
 Thr Gln Thr Leu Asp Phe Tyr Pro Gly Leu Pro Glu Tyr Ser Gln Leu  
  165             170             175  
 Leu Asn Tyr Phe Ile Ser Leu Asn Leu  
  180             185

&lt;210&gt;1210

&lt;211&gt;173

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1210

Met Ala Asp Asp Thr Leu Ile Pro Lys Leu Met Lys Asn Ser Leu Ser  
   1               5               10               15  
 Gln Ala Cys Ser Glu Gly Leu Leu Ile Ala Lys Tyr Pro Pro Leu Gln  
   20              25              30  
 Val Ile Val His Phe Asp Asn Asn Leu Val Val Lys Thr His Leu Ser  
   35              40              45  
 Val Ala Pro Val Phe Ser Cys Leu Phe Leu Gly Pro Ala Ala His Lys  
   50              55              60  
 Ala Met Gln Glu Ile Val Leu Trp Cys Ser Arg Tyr Ala Asn Lys Glu  
   65              70              75              80  
 His Pro Pro Phe Ser Ser His Phe Ala Lys Asp Leu Ile Pro Ser Gln  
   85              90              95  
 Tyr Leu Glu Ile Leu Asn Cys Val Ala Glu Ile Pro Phe Gly Glu Gln  
  100             105             110  
 Gln Thr Tyr Ala Glu Ile Ala Lys Lys Thr Asp Thr His Pro Arg Thr  
  115             120             125  
 Val Gly Ala Ala Cys Lys Gln Asn Pro Phe Leu Leu Phe Phe Pro Cys  
  130             135             140  
 His Arg Val Val Gly Ser His Gly Glu Arg Asn Tyr Val Leu Gly Pro  
 145             150             155             160  
 Val Ile His Glu Ile Leu Leu Lys Phe Glu Asn Ser Tyr  
  165             170

&lt;210&gt;1211

&lt;211&gt;137

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1211

Met Ile Glu Asn Asp Phe Pro Glu Ala Ser Asn Phe Glu Ser Ser His  
   1               5               10               15  
 Phe Tyr Arg Asp Lys Val Gly Val Ile Ile Leu Cys Gly Gly Glu Gly  
   20              25              30  
 Lys Arg Leu Ser Pro Leu Thr Asn Cys Arg Cys Lys Pro Thr Val Ser  
   35              40              45  
 Phe Gly Gly Arg Tyr Lys Leu Ile Asp Ile Pro Ser His Ala Ile

50	55	60
Ser Ala Gly Phe Ser Lys Ile Phe Val Ile Gly Gln Tyr Leu Thr Tyr		
65	70	75
Thr Leu Gln Gln His Leu Phe Lys Thr Tyr Phe Tyr His Gly Val Leu		80
85	90	95
Gln Asp Gln Ile His Leu Leu Ala Pro Glu Ala Arg Gln Gly Asp Gln		
100	105	110
Ile Trp Tyr Gln Gly Thr Gln Met Gln Phe Glu Lys Thr Tyr Phe Ile		
115	120	125
Ser Lys Ile Gln Lys Ser Asn Thr Phe		
130	135	
<210>1212		
<211>94		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1212		
Met Leu Ile Arg Leu Phe Leu Gly Ile Ser Leu Pro Lys Gly Phe Pro		
1	5	10
Leu Tyr Leu Glu Pro Pro Leu Val Leu Ala Thr Phe Gln Gly Thr Gln		
20	25	30
Phe Val Gly Thr Tyr Ser Glu Ala Thr Asn Pro Leu Tyr Ile Asp Asn		
35	40	45
Leu Asn Leu Asn Tyr His Tyr Thr Gln Glu Leu Leu Tyr Lys Ala Val		
50	55	60
Pro Cys Asn Tyr Lys Ser Ile Tyr Arg Glu Ile Pro Leu Ile Ile Phe		
65	70	75
Pro Glu Val Leu Ile Gly Ser Thr Pro Thr Gln Ser Thr Glu		80
85	90	
<210>1213		
<211>168		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1213		
Met Arg Gln Phe Cys Asn Leu Leu Ser Leu Ser Arg Leu Trp Leu Ala		
1	5	10
Leu Tyr Phe Cys Gln Glu Lys Leu His Ile Arg Leu Leu Ala Ile Val		
20	25	30
Gly Ala Met Leu Ser Asp Val Leu Asp Gly Tyr Leu Ala Arg Arg Tyr		
35	40	45
Lys Ala Thr Ser Arg Leu Gly Ser Ile Leu Asp Pro Ile Thr Asp Lys		
50	55	60
Val Phe Val Phe Val Cys Ile Thr Val Leu Tyr Met Glu Gly Ser Leu		
65	70	75
Ser Ile Ala His Leu Phe Phe Ile Cys Ala Arg Asp Leu Phe Leu Xaa		
85	90	95
Thr Phe Val Phe Tyr Leu Ser Leu Val Lys Gly Trp Lys Gly Tyr Asp		
100	105	110
Tyr Gly Ser Leu Phe Trp Gly Lys Ile Phe Thr Val Val Gln Phe Ile		
115	120	125
Ile Leu Leu Gly Val Thr Ala Gly Gly Glu Ile Pro Trp Thr Gly Leu		
130	135	140
Val Pro Leu Val Ala Leu Gly Phe Leu Tyr Phe Leu Glu Arg Ile Met		
145	150	155
Asp Tyr Lys Lys Gln Phe Leu Arg		160
165		
<210>1214		
<211>88		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1214		
Met Ser Arg Ser Leu Arg Lys Gly Pro Phe Val Asp His His Leu Leu		
1	5	10
Lys Lys Val Arg Ala Met Asn Ile Glu Glu Lys Lys Thr Pro Ile Lys		
20	25	30

Thr Trp Ser Arg A Ser Met Ile Thr Pro Glu Met Ile Gly His Thr  
     35                          40                          45  
 Phe Glu Val His Asn Gly Lys Lys Phe Leu Thr Val Phe Val Ser Glu  
     50                          55                          60  
 Thr Met Val Gly His Lys Leu Gly Glu Phe Ser Pro Thr Arg Ile Phe  
     65                          70                          75                          80  
 Lys Ser His Pro Val Lys Lys Gly  
     85

&lt;210&gt;1215

&lt;211&gt;252

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1215

Met Leu Ile Val Leu Ala Phe Arg Gln Val Phe Phe Ser His Ser Arg  
     1                          5                          10                          15  
 Ser Gln Leu Asp Arg Leu Lys Asn Tyr Leu Arg Leu Leu Lys Gln Asn  
     20                          25                          30  
 Phe Ala Ile Thr Leu Pro Lys Glu Arg Thr Ser Lys Gly His Ser Leu  
     35                          40                          45  
 Met Leu Thr Phe Asp Phe Ala Ser Phe Asp Phe Tyr Thr Asn Ile Phe  
     50                          55                          60  
 Pro Phe Leu Glu Glu Gln Lys Ile Pro Ala Val Val Gly Val Ala Ser  
     65                          70                          75                          80  
 Arg Tyr Ile Pro Ser Asn Ala Ala Gln Asp Leu His Pro Ser His Arg  
     85                          90                          95  
 Leu Lys Pro Ser Glu Thr Leu Ala Phe Gln Asp Glu Ile Phe Ser Asn  
     100                         105                         110  
 Tyr Met Pro Phe Cys Cys Gln Asn Glu Leu Ile Glu Met Ala Lys Ser  
     115                         120                         125  
 Pro Tyr Ile Gln Leu Ala Ser Ser Gly Phe Ala Ile Arg Asn Leu Met  
     130                         135                         140  
 Asn Asn Pro Pro Tyr Leu Thr Thr Glu Ile Leu Leu Ser Arg His His  
     145                         150                         155                         160  
 Ile Glu Thr Ile Thr Gly Ala Lys Pro Leu Ala Phe Leu Phe Pro Phe  
     165                         170                         175  
 Gly Lys Ser Asp Pro Thr Ser Arg Lys Leu Ala Ala Asp His Tyr Pro  
     180                         185                         190  
 Tyr Ser Phe Leu Leu Gly Asn Thr Ile Asn Arg Lys Leu Lys Thr His  
     195                         200                         205  
 Asn Ile Tyr Arg Leu Asp Ile Lys Pro Met Gln Tyr Val Cys Pro Ser  
     210                         215                         220  
 Leu Phe Gln Ser Ser Arg Tyr Leu Lys Asn Trp Ile Lys Glu Lys Ser  
     225                         230                         235                         240  
 Lys Gln Leu Tyr Leu Lys Lys Gln Leu Pro Lys Arg  
     245                         250

&lt;210&gt;1216

&lt;211&gt;149

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1216

Met Ala Asp Leu Glu Val Phe Gln Ala Asp Phe Ala Leu Leu Phe Glu  
     1                          5                          10                          15  
 Ala Gly Leu Leu Ala Ile Lys Gln Gly Asp Glu Asp Ser Ala Arg Lys  
     20                         25                         30  
 Leu Phe Gln Ser Leu His Ile Leu Asn Pro Asn His Tyr Gly His Asp  
     35                         40                         45  
 Leu Gly Leu Ala Leu Ile Ser Leu His Lys Met Asp Leu Phe Asp Ala  
     50                         55                         60  
 Glu Glu Arg Leu Ser Ala Leu Ile Lys Gly Asn Glu Asp Asn Trp Ser  
     65                         70                         75                         80  
 Ile Lys Ala Phe Leu Ser Leu Thr His Met Leu Ile Val Leu His Gln  
     85                         90                         95  
 Gly Ser Ser Phe Glu Val Arg Arg Glu Ser Leu Glu Ser Cys Leu Lys  
     100                         105                         110

Phe Ala Asp Gln Val Ile Ala Asn Cys Lys Ile Glu Ser Thr Arg Ala  
 115 120 125  
 Leu Ala Gln Ser Val Leu Asp Trp His Asp Thr Leu Val Ala Lys Ser  
 130 135 140  
 Ala Gly Pro Leu Gly  
 145  
 <210>1217  
 <211>75  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1217  
 Met Phe Phe Ala Pro Leu Leu Tyr Glu Ser Leu Arg Arg Gly Leu Met  
 1 5 10 15  
 His Pro Thr Ser His Met Gln Gln Gln Leu Ala Arg Leu Glu Phe Ile  
 20 25 30  
 Asn Asp Gln Leu Thr Thr Glu Leu Glu His Val Asn Glu Leu Leu Cys  
 35 40 45  
 Ser Leu Gly Phe Pro Glu Gly Leu Thr Thr Ile Lys Ala Ile Ala Glu  
 50 55 60  
 Glu Val Leu Ser Asp Asp Glu Pro Leu Leu Asp  
 65 70 75  
 <210>1218  
 <211>467  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1218  
 Leu Pro Ser Asn Arg Lys Asn Ala Lys Arg Asn Leu Tyr Lys Leu Ser  
 1 5 10 15  
 Phe Ile Ile Val Arg Lys Cys Val Val Thr Ser Ala Leu Asn Asp Phe  
 20 25 30  
 Phe Leu Thr Glu Thr Val Met Asn Ala Thr Lys His Cys Arg Ala Ser  
 35 40 45  
 Phe Ser Asn Ser Pro Arg His Leu Leu Ala Gln Leu Ala Glu Asp Ile  
 50 55 60  
 Thr Ser Thr His Gln Lys Pro Phe Thr Lys Arg Trp Ile Leu Val Ala  
 65 70 75 80  
 Asn Ala Thr Thr Gly His Trp Ile Lys Asn Gln Leu Val His Val Leu  
 85 90 95  
 Ser Asp His Ile Phe Met Gly Ser Thr Ile Phe Thr Ala Ser Asp Ser  
 100 105 110  
 Ile Val Lys His Leu Phe Leu Gly Ser Gly Cys Ser Gln Pro Asn Ile  
 115 120 125  
 Pro Asp Tyr Leu Thr Leu Pro Leu Leu Ile Asn Asn Ile Leu Glu Glu  
 130 135 140  
 Ile Ser Lys Ala Ser Lys Phe Glu Asn Gly Arg Glu Phe Leu Ser Pro  
 145 150 155 160  
 Pro Thr Tyr Gly Thr Thr Lys Lys Leu Ala Ala Ala Phe Lys Gln Phe  
 165 170 175  
 His Thr Phe Ser Gln Arg Pro Thr Lys Asn Ala Ser His Tyr Gln Glu  
 180 185 190  
 Leu Phe Gln Ile Leu Glu Ser His Phe Ser Ser Tyr Glu Glu Met Phe  
 195 200 205  
 Thr Thr Ile Leu Asn Asn Arg Thr Gln Glu Glu Asp Cys Ser Leu His  
 210 215 220  
 Ile Phe Gly Tyr Ala His Leu Pro Lys His Leu Ala Glu Phe Phe Ile  
 225 230 235 240  
 Asn Leu Ser Thr Tyr Phe Pro Val Tyr Phe Tyr Cys Phe Ser Pro Cys  
 245 250 255  
 Arg Glu Tyr Phe Gly Asp Leu Leu Ser Asp Arg Ala Ile Asp Phe Phe  
 260 265 270  
 Trp Asn Gln Leu Pro Asp Ser Pro Ile Lys Asn Ala Trp Glu His Tyr  
 275 280 285  
 Val Leu Ser Asp Arg Gln Ala Leu Leu Ala Asn Leu Ala His Lys Ser  
 290 295 300

Gln Ser Ser Gln        Phe Phe Leu Asp Arg Glu Ile A Tyr Gln Glu  
 305                    310                    315                    320  
 Met Phe Leu Pro Ser Lys His Asp Ser Ser Leu Gly Val Ile Gln Asn  
 325                    330                    335  
 Ser Ile Leu Asp Leu Lys Pro Thr Ser Pro Gln Asp Phe Ser Gln Thr  
 340                    345                    350  
 Lys Gln Thr Ile Cys Ile Tyr Arg Ala Leu Asn Ile Pro Arg Glu Val  
 355                    360                    365  
 Gln Glu Val Phe Cys Lys Val Thr Glu Leu Leu His Arg Gly Val Ser  
 370                    375                    380  
 Pro Glu Glu Ile Phe Ile Leu Ser Ser His Ile Glu Ser Tyr Lys Val  
 385                    390                    395                    400  
 His Leu Asn Ala Ile Phe Asn Pro His Val Pro Ile Tyr Phe Thr Asp  
 405                    410                    415  
 Glu Val Asp Pro Arg Ala Glu Asp Leu Arg Asn Lys Asn Pro Pro Thr  
 420                    425                    430  
 Phe Phe Tyr Phe Thr Asn Thr Arg Gly Phe Thr Leu His Ser Ser Thr  
 435                    440                    445  
 Pro Tyr Ala Pro Thr Thr Thr Thr Tyr Arg Ser Lys Gln Gly Ser  
 450                    455                    460  
 Leu Ser Asp  
 465  
<210>1219  
<211>81  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1219  
Leu Glu Ala Pro Met Asn Glu Gly Ile His Ser Val Cys Phe Gln Lys  
 1                    5                    10                    15  
Thr Pro Arg Leu Thr Ala Lys Ser Val Val Ser Met Glu Met Leu Leu  
 20                    25                    30  
Thr Thr Gln Gln Leu Pro Ser Ala Glu Gly Met Pro Ser Val Ala Asn  
 35                    40                    45  
Leu Glu Ala Asp Phe Leu Arg Ala Glu Ala Leu Leu Ala Glu Met Arg  
 50                    55                    60  
Glu Ile Arg Gly Cys Leu Glu Gln Ser Leu Arg Thr Leu Val Pro Ser  
 65                    70                    75                    80  
Glu

<210>1220  
<211>95  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1220  
Met Met Lys Tyr Leu Pro Tyr Ile Ala Ile Thr Ala Cys Ile His Gly  
 1                    5                    10                    15  
Gly Ile Leu Leu Val Phe Ala Ser Pro Leu Pro Lys Lys Arg Leu  
 20                    25                    30  
Gln Pro Lys Ala Phe Gln Glu Lys Leu Val Thr Ile Gln Pro Lys Pro  
 35                    40                    45  
Pro Val Pro Thr Pro Ser Val Val Asp Pro Ala Lys Thr Ile Arg  
 50                    55                    60  
Pro Ser Val Leu Arg Ser His Lys Asn Lys Leu Asn Ala Ala Leu Leu  
 65                    70                    75                    80  
Lys Arg Thr Ser Arg Arg Leu Tyr Lys Asn Pro Phe Gln Lys Leu  
 85                    90                    95

<210>1221  
<211>96  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1221  
Leu Asn Lys Phe Lys Thr Tyr Leu Gln Thr Ala Leu Ile Ala Pro Phe  
 1                    5                    10                    15  
Phe Ser Phe Pro Ala Leu Ser Gly Ser Phe Ser Ser Ile Gln Ala Glu

20	25		
Glu Ile Xaa Gln Gln Val Asn His Pro Gly Ala Glu Leu Leu Ser Glu			
35	40	45	
Gly Ser Tyr Ile Pro Gly Leu Gln Thr Phe Arg Leu Gly Ile Lys Ile			
50	55	60	
Tyr Ser Phe Gln Arg Glu Pro Tyr Leu Leu Glu Glu Ser Arg Arg Asn			
65	70	75	80
Trp Lys Ser Ser Gln Asn Phe Leu Ala Val Ala Glu Arg Phe Arg Gly			
85	90	95	

&lt;210&gt;1222

&lt;211&gt;76

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1222

Val Arg Ala Leu Phe Arg Ser Gly Tyr Lys Gly Arg Gln Gly Ile Tyr			
1	5	10	15
Glu Phe Leu Arg Pro Asn Thr Leu Phe Arg Ser Glu Val Ala Ser Asn			
20	25	30	
Arg Pro Tyr His Ile Leu Arg Glu Thr Ala Glu Gln Asn Gly Phe Leu			
35	40	45	
Pro Ile Leu Glu His Gly Ile Ala Leu Ala Val Ser Gly Glu Thr Thr			
50	55	60	
Leu Ala Glu Val Leu Arg Val Thr Lys Arg Cys Asp			
65	70	75	

&lt;210&gt;1223

&lt;211&gt;185

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1223

Val Pro Thr Leu Ala Lys Ser Phe Tyr Ile Asn Ile Arg Asp Ser Arg			
1	5	10	15
Phe Tyr Ser Trp Leu Cys Phe Ile Met Lys Glu Thr Tyr Tyr Arg Asp			
20	25	30	
Phe Leu His Glu Asn Tyr Leu Lys Asn Lys Ser Met Phe Met Lys			
35	40	45	
Ile Tyr Lys Thr Ala Gly Glu Phe Phe Leu Ala Asn Ala Lys Trp Pro			
50	55	60	
Leu Val Pro Ala Gly Tyr Arg Arg Val Arg Gly Lys Asp Phe Val Leu			
65	70	75	80
Ser Pro Leu Val Asp Leu Val Ile Leu Phe Pro Trp Val Thr Lys Asp			
85	90	95	
Ser Arg Tyr Ser Pro Cys Ser Met Thr Phe Thr Cys Ile Cys Arg Ser			
100	105	110	
Ile Val Glu Cys Ile Pro Val Val Ser Thr Leu Phe Gly Ile Gly Arg			
115	120	125	
Phe Cys Ala Val Trp Cys Val Glu Gly Phe Ser Gly Ser Thr Phe Asp			
130	135	140	
Lys Ile Tyr His Thr Ile Val Ala Val Leu Gly Ile Leu Gly Leu Gly			
145	150	155	160
Ile Leu Thr Phe Ile Leu Arg Ile Ile Phe Ser Val Leu Met Leu Pro			
165	170	175	
Val Trp Phe Leu Phe Lys Cys Tyr Ser			
180	185		

&lt;210&gt;1224

&lt;211&gt;75

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1224

Met Trp Trp Asn Pro Ala Val Glu Asn Gln Ala Thr Asp Arg Val His			
1	5	10	15
Arg Ile Gly Gln Ser Arg Ser Val Ser Ser Tyr Lys Leu Val Thr Leu			
20	25	30	
Asn Thr Ile Glu Glu Lys Ile Leu Thr Leu Gln Asn Arg Lys Xaa Ser			
35	40	45	

Leu Val Lys Lys        Ile Asn Ser Asp Asp Glu Val V Ser Lys Leu  
     50                  55                  60

Thr Trp Glu Glu Val Leu Glu Leu Leu Gln Ile  
     65                  70                  75

<210>1225

<211>122

<212>PRT

<213>Chlamydia pneumoniae

<400>1225

Met Arg Asp Arg Leu Gly Ser Leu Ser Leu Ile Leu Lys Val Lys Ile  
     1                  5                  10                  15

His Lys Tyr Leu Asp Thr Leu His Asn Gln Lys Arg Leu Ala Leu Thr  
     20                  25                  30

Val Ser Arg Asn Ile Gln Ala Thr Asn Lys Arg Ile Ala Asp Leu His  
     35                  40                  45

Leu Glu Arg Tyr Glu His Phe Ile Ser Arg Asp Asn Ile Lys His Tyr  
     50                  55                  60

Asp Ile Leu Leu Glu Tyr Leu Lys Thr Leu Gln Ser Ser Leu Tyr Lys  
     65                  70                  75                  80

Gln Gln Ser Glu Ser Leu Arg Phe Leu Glu Ile His His Gln Gln Leu  
     85                  90                  95

Gln Glu Leu Ile Asn Arg Arg Lys Ile Ile Glu Lys Ile Lys Asn Asn  
     100                  105                  110

Lys Tyr Ser Lys Asp Gln Glu Ile Gly Thr  
     115                  120

<210>1226

<211>178

<212>PRT

<213>Chlamydia pneumoniae

<400>1226

Val Thr Thr Pro Gln Ser Pro Gly Ser Leu Ser Gln Ser His Leu Pro  
     1                  5                  10                  15

His Pro His Asp Pro Trp Asp Thr Glu Pro Thr Ser Leu Xaa Glu Xaa  
     20                  25                  30

Pro Asn Asp Lys Ala Ser Gln Glu Leu His Ser Leu Val His Leu Phe  
     35                  40                  45

Arg Lys Leu Ser Ile His Leu Leu Ser Glu Val Glu Lys Thr Val Gln  
     50                  55                  60

Gln Leu Lys Pro Asp Leu Leu Glu Leu Ala Leu Leu Ile Cys Glu Lys  
     65                  70                  75                  80

Phe Leu Tyr Lys Leu Glu Asn Pro Gln Glu Leu Ala Leu Leu Leu  
     85                  90                  95

Ser Thr Ala Leu Gln Arg His Thr Thr Leu Arg Ser Leu Thr Pro Ile  
     100                  105                  110

Lys Val Phe Leu His Pro Glu Asp Leu Lys Thr Leu Thr Asp Trp Ile  
     115                  120                  125

Ser Thr His Glu Leu Pro Met Ile Lys His Ala Glu Phe Phe Pro Asp  
     130                  135                  140

Thr Ser Cys Arg Arg Ser Gly Phe Lys Ile Glu Thr Pro Asn Gly Ile  
     145                  150                  155                  160

Leu Arg Gln Glu Ile Ser Glu Glu Leu Asp His Leu Leu Ser Val Leu  
     165                  170                  175

Thr Ala

<210>1227

<211>161

<212>PRT

<213>Chlamydia pneumoniae

<400>1227

Leu Leu Leu Arg Tyr His Ala Lys Ala Glu Lys Pro Thr Leu Gln Leu  
     1                  5                  10                  15

Thr Leu Asn Glu Asn Tyr Ile Ala His Leu Thr Lys Glu Glu Ser Glu  
     20                  25                  30

Lys Ile Val Ala His Thr Lys His Tyr Leu Leu Ser Asn Xaa Asp Asp

35	40	45
Ser Tyr Asp Ile Val Ile Glu Thr Leu Pro Phe Ala Arg Leu Gln Asn		
50	55	60
Lys Lys Ser Phe Ser Ala Lys Val Leu Ile Gly Ser Met Ile Leu Val		
65	70	75
Ile Ser Leu Met Ile Val Ala Leu Ala Ser Phe Tyr Leu Ala Arg His		
85	90	95
Ala Tyr Glu Arg Val Ser Pro Glu Pro Arg Lys Ile Lys Arg Gly Ile		
100	105	110
Asn Ile Ser Lys Leu Leu Glu Ile Ile Gln Lys Glu Ser Pro Glu Lys		
115	120	125
Ile Ala Leu Ile Leu Ser Tyr Leu Asp Pro Lys Lys Ala Glu Ala Leu		
130	135	140
Leu Asn Arg Leu Pro Glu Asp Leu Lys His Gln Val Leu Lys Tyr Lys		
145	150	155
Leu		

&lt;210&gt;1228

&lt;211&gt;75

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1228

Val Phe Phe Gln Asn Leu Ala Lys Leu Thr Ala Leu Gly Ile Ser		
1	5	10
Pro Leu Gly Cys Leu Leu Ile Gly Gly Val Val Ser Cys Ala Ile Leu		
20	25	30
Phe Gly Arg Ser Ser Asn Pro Ser Leu Ala Pro Thr Gln Val Lys Thr		
35	40	45
Glu Lys Thr Ser Gly Asn Trp Leu Lys Leu Thr Gln Met Gly Asn Pro		
50	55	60
Lys Leu Ile Glu Ser Leu Thr Lys Lys Asp Ser		
65	70	75

&lt;210&gt;1229

&lt;211&gt;100

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1229

Met Gly Tyr Val Phe Tyr Val Ile Ala Gly Ser Ile Phe Leu Gly Ile		
1	5	10
Ser Leu Gly Ala Tyr Cys Gln Leu Tyr Tyr Ser Val Lys Ser Val Leu		
20	25	30
Phe Ser Trp Tyr Leu Leu Thr Val Tyr Ala Leu Glu Lys Arg His Ala		
35	40	45
Leu Leu Ala Leu Ser Gln Leu Val Gly Glu Glu Asp Ala Gln Ser Gln		
50	55	60
Lys Glu Ile Asp Phe Leu Ser Gln Cys Asp Lys Leu Ser Trp Arg Ala		
65	70	75
Phe Leu Lys Asn Ser Tyr Glu Ile Ile Pro Thr Phe Gln Arg Asp Gly		
85	90	95
Arg Pro Ser Phe		
100		

&lt;210&gt;1230

&lt;211&gt;103

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1230

Val Thr Ser Ser Leu Gly Val Arg Ser Ser Lys Ile Ala Thr Arg Ser		
1	5	10
Ser Gln His Phe Lys Glu Met Glu Asp Leu Leu Ser Glu Arg Val Gln		
20	25	30
Gly Phe Leu Glu Ser Ile Glu Thr Ile Ala Glu His Asp Arg Ala Ile		
35	40	45
Leu Cys Ile Glu Asn Phe Trp Ala Ser Lys Asn Leu Phe Asp Phe Glu		
50	55	60

Ile Ala Ala Tyr	Glu Ala Val Glu Lys Tyr Leu Lys	Leu Arg Gln	
65	70	75	80
Arg Ala Pro Leu Arg	Leu Ala Ser Lys	Leu Phe Arg Phe Leu Asp Val	
	85	90	95
Pro Ser Ile Arg Phe Ser Ser			
	100		

&lt;210&gt;1231

&lt;211&gt;94

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1231

Ser Ile Ala Thr Gly Glu Thr Met Leu Tyr Phe Ile Glu Gln Leu Asn			
1	5	10	15
Lys Leu Ser Thr Ser Phe Cys Val Phe Pro Met Ile Leu Leu Leu Gly			
20	25	30	
Gly Phe Leu Thr Trp Lys Leu Arg Gly Leu Gln Phe His Gly Leu Lys			
35	40	45	
Leu Gly Phe Asn Leu Met Leu Gln Asn Lys Leu Asp Asp Ser Ser Ser			
50	55	60	
Lys Ala Asn Glu Val Ser Ser Tyr Glu Ala Val Ala Gly Ile Leu Ala			
65	70	75	80
Gly Asn Phe Gly Thr Gly Asn Ile Ala Gly Met Leu Ser Pro			
85	90		

&lt;210&gt;1232

&lt;211&gt;240

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1232

Val Pro Asn Arg His Val Asp Met Asn Ser Trp Trp Arg Ser Ala Cys			
1	5	10	15
Tyr Pro Arg Ser Thr Phe Tyr Pro Leu Ser Asp Gly Asp Ser Thr Phe			
20	25	30	
His Arg Arg Ile Thr Lys Pro Asp Phe Arg Leu Cys Ser Thr Cys Lys			
35	40	45	
Ser Cys Ser Gln Pro Ile Leu Tyr Leu Tyr Ala Leu Leu Val Ile Ala			
50	55	60	
Asn His Asp Glu Ile Ser Phe Gly Leu Leu Arg Tyr Phe Leu Gly Gly			
65	70	75	80
Tyr Arg Pro Ser Lys Thr Ala Arg Leu Ala Met Ser Ile Leu Gln Ile			
85	90	95	
His Gly Val Met Leu Asp Ser Gln Leu Val Lys Thr Ser Ile Ser Thr			
100	105	110	
Met Thr Pro Thr Leu Leu Thr Lys Ser Val His Ser Leu Leu Ala Ile			
115	120	125	
Leu His Ile Thr Asn Gln Lys Ser Ile Pro Lys Tyr Ser Lys Gly Ser			
130	135	140	
Arg Gly Leu Phe Val Leu Leu Arg Val Asn Ser Ile Phe Thr Ala Thr			
145	150	155	160
Thr Ile Ser Pro Ser Leu Ser Leu Arg Gln Cys Pro Asp Arg Tyr Thr			
165	170	175	
Ile Arg Ala Gly Arg Asn Leu Pro Asp Lys Glu Phe Arg Tyr Leu Ser			
180	185	190	
Thr Val Ile Val Thr Ala Ala Ile His Gln Gly Leu Gly Ser Met Leu			
195	200	205	
Ser Leu Arg Leu Thr Tyr Pro Phe Asn Leu Leu Ala Leu Gly Arg Arg			
210	215	220	
His Thr Ile Tyr Phe Pro Leu Glu Val Cys Ile Val Leu Cys Phe Cys			
225	230	235	240

&lt;210&gt;1233

&lt;211&gt;133

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1233

Leu Asn Phe Val Ser Thr Leu Thr Gly Ser Asp Phe Tyr Ala Pro Val

1	5	10	15												
Leu	Glu	Lys	Leu	Glu	Glu	Ala	Phe	Ala	Asp	Thr	Thr	Gly	Gln	Ala	Ile
			20				25							30	
Leu	Phe	Ser	Ser	Ser	Pro	Asp	Phe	Ile	Val	His	Pro	Ile	Ala	Gln	Gln
							35		40					45	
Leu	Gly	Ile	Ser	Ser	Trp	Tyr	Ala	Ser	Cys	Tyr	Arg	Asp	Gln	Ser	Ala
							50		55					60	
Glu	Gln	Thr	Ile	Tyr	Lys	Lys	Cys	Leu	Thr	Gly	Asp	Lys	Lys	Ala	Gln
							65		70					80	
Ile	Leu	Ser	Tyr	Ile	Lys	Lys	Ile	Asn	Gln	Ala	Arg	Ser	His	Thr	Phe
							85							95	
Ser	Asp	His	Ile	Leu	Asp	Leu	Pro	Phe	Leu	Met	Leu	Gly	Glu	Glu	Lys
							100		105					110	
Thr	Val	Val	Arg	Pro	Gln	Gly	Arg	Leu	Lys	Lys	Met	Ala	Lys	Lys	Tyr
							115		120					125	
Tyr	Trp	Asn	Ile	Val											
					130										

&lt;210&gt;1234

&lt;211&gt;118

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1234

Val	Ile	Leu	Leu	Gln	Asn	Ile	Lys	Arg	Cys	Ser	Leu	Lys	Gln	Leu	Lys
						1	5	10	15						
Val	Leu	Ala	Thr	Leu	Leu	Leu	Ser	Leu	Ser	Leu	Pro	Thr	Leu	Glu	Ala
							20		25					30	
Ala	Glu	Asn	Arg	Asp	Ser	Asp	Ser	Ile	Val	Trp	His	Leu	Asp	Tyr	Gln
							35		40					45	
Glu	Ala	Leu	Gln	Lys	Ser	Lys	Glu	Ala	Glu	Leu	Pro	Leu	Leu	Val	Ile
							50		55					60	
Phe	Ser	Gly	Ser	Asp	Trp	Asn	Gly	Pro	Cys	Met	Lys	Ile	Arg	Lys	Glu
							65		70					80	
Val	Leu	Glu	Ser	Pro	Glu	Phe	Ile	Lys	Arg	Val	Gln	Gly	Lys	Phe	Val
							85		90					95	
Cys	Val	Glu	Val	Glu	Tyr	Leu	Lys	His	Arg	Pro	Gln	Leu	Lys	Thr	Phe
							100		105					110	
Val	Ser	Lys	Ile	Leu	Leu										
					115										

&lt;210&gt;1235

&lt;211&gt;87

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1235

Met	Lys	Ser	Phe	Lys	Phe	Leu	Leu	Pro	Phe	Leu	Ser	Val	Ile	Leu	Cys	
						1	5	10	15							
Cys	Gly	Asn	Leu	Leu	Leu	Ser	Ser	Pro	Arg	Ser	Arg	Ala	Ile	Ser	Val	Thr
							20		25					30		
Glu	Ser	Ile	Gly	Met	Ser	Ala	Val	Lys	Thr	Leu	Val	Leu	Ser	Glu	Lys	
							35		40					45		
Ala	His	Glu	Phe	Leu	Glu	Gly	Ile	Gly	Tyr	Gly	Val	Gly	Ala	Ser	Ser	
							50		55					60		
Ile	Leu	Arg	Asp	Trp	Gln	Thr	Gln	Gln	Trp	Leu	Glu	Ile	Glu	Ser	Leu	
							65		70					80		
Leu	Ala	Gln	Asn	Glu	Val	Met										
					85											

&lt;210&gt;1236

&lt;211&gt;141

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1236

Met	Gln	Tyr	Phe	Ser	Pro	Ala	Lys	Leu	Asn	Leu	Phe	Leu	Lys	Ile	Trp
						1	5	10	15						
Gly	Lys	Arg	Phe	Asp	Asn	Phe	His	Glu	Leu	Thr	Thr	Leu	Tyr	Gln	Ala
							20		25					30	

Ile Asp Phe Gly      Thr Leu Ser Leu Lys Asn Ser Met Lys Asp Ser  
               35                  40                                    45  
 Leu Ser Ser Asn Val Asn Glu Leu Leu Ser Pro Ser Asn Leu Ile Trp  
               50                  55                          60  
 Lys Ser Leu Glu Ile Phe Arg Arg Glu Thr Gln Ile His Gln Pro Val  
               65                  70                          75                    80  
 Ser Trp His Leu Asn Lys Ser Ile Pro Leu Gln Ser Gly Leu Gly Gly  
               85                  90                          95  
 Gly Ser Ser Asn Ala Ala Thr Ala Leu Tyr Ala Leu Asn Glu His Phe  
               100                 105                        110  
 Gln Thr His Ile Pro Ile Thr Thr Leu Gln Leu Trp Ala Arg Glu Ile  
               115                 120                        125  
 Gly Ser Asp Val Pro Phe Phe Phe Leu Gln Glu Gln His  
               130                 135                        140

&lt;210&gt;1237

&lt;211&gt;174

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1237

Leu Gly Ser Arg Asn Arg Lys Arg Cys Ser Phe Phe Phe Ser Ser Gly  
       1                        5                        10                    15  
 Thr Ala Leu Gly Lys Gly Arg Gly Glu His Leu Phe Ser Ile Lys Lys  
       20                        25                        30  
 Leu Asn His Lys His Lys Tyr Val Leu Tyr Leu Asp His Gln Gly Ile  
       35                        40                        45  
 Pro Thr Glu Lys Ala Tyr Gln Ser Leu Leu Pro Gln Asp Tyr Ser Thr  
       50                        55                        60  
 Gly Asn His Asn Ala Cys Phe Tyr Gly Glu Asn Asp Leu Glu Lys Ser  
       65                        70                        75                    80  
 Val Phe Arg Ile Arg Thr Asp Leu Lys Asn Lys Lys His Met Leu Glu  
       85                        90                        95  
 Arg Met Trp Ser Pro Phe Glu Ser His Val Leu Met Ser Gly Ser Gly  
       100                      105                        110  
 Ala Thr Leu Phe Val Cys Tyr Leu Glu Glu Leu Glu Gln Asp Ser Lys  
       115                      120                        125  
 Val Ser Ser Gln Ile His Ser Leu Ile Lys Gln Thr Gln Gly Ile Pro  
       130                      135                        140  
 Val Ser Arg Leu Tyr Arg Glu Pro His Trp Tyr Ser Leu Lys Gln Ser  
       145                      150                        155                    160  
 Thr Tyr Lys Asn Ser Pro Leu Glu Cys Phe Gln Pro Gln Ile  
       165                      170

&lt;210&gt;1238

&lt;211&gt;106

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1238

Met Gly Leu Tyr Asp Arg Asp Tyr Ile Gln Asp Ser Arg Val Gln Gly  
       1                        5                        10                    15  
 Thr Phe Ala Ser Arg Val Tyr Gly Trp Met Thr Ala Gly Leu Ile Val  
       20                        25                        30  
 Thr Ser Cys Val Ala Leu Gly Leu Tyr Phe Ser Gly Leu Tyr Arg Ser  
       35                        40                        45  
 Leu Phe Ser Phe Trp Trp Val Trp Cys Phe Ala Thr Leu Gly Val Ser  
       50                        55                        60  
 Phe Phe Ile Asn Ser Lys Ile Gln Thr Leu Ser Val Val Gly Gln Val  
       65                        70                        75                    80  
 Met Ala Tyr Ala Met Val Leu Ala Lys Gly Met Glu Ile Asp Cys Pro  
       85                        90                        95  
 Arg Asn Leu Ala Lys Ser Val Thr Val Glu  
       100                      105

&lt;210&gt;1239

&lt;211&gt;217

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1239

Met Ser Asn Lys Val Leu Gly Gly Ser Leu Leu Ile Ala Gly Ser Ala  
 1 5 10 15  
 Ile Gly Ala Gly Val Leu Ala Val Pro Val Leu Thr Ala Lys Gly Gly  
 20 25 30  
 Phe Phe Pro Ala Thr Phe Leu Tyr Ile Val Ser Trp Leu Phe Ser Met  
 35 40 45  
 Ala Ser Gly Leu Cys Leu Leu Glu Val Met Thr Trp Met Lys Glu Ser  
 50 55 60  
 Lys Asn Pro Val Asn Met Leu Ser Met Ala Glu Ser Ile Leu Gly His  
 65 70 75 80  
 Val Gly Lys Ile Ser Ile Cys Leu Val Tyr Leu Phe Leu Phe Tyr Ser  
 85 90 95  
 Leu Leu Ile Ala Tyr Phe Cys Glu Gly Asn Ile Leu Cys Arg Val  
 100 105 110  
 Phe Asn Cys Gln Asn Leu Gly Ile Ser Trp Ile Xaa Xaa Leu Gly Pro  
 115 120 125  
 Leu Gly Phe Ala Ile Leu Met Gly Pro Ile Ile Xaa Xaa Gly Thr Xaa  
 130 135 140  
 Xaa Ile Asp Tyr Cys Xaa Xaa Phe Phe Xaa Xaa Gly Leu Xaa Val Xaa  
 145 150 155 160  
 Phe Gly Ile Xaa Xaa Ala Leu Gly Phe Leu Lys Ile Gln Pro Ser Phe  
 165 170 175  
 Met Val Arg Ser Ser Met Val Asn Tyr Asn Lys Arg Ile Ser Cys Val  
 180 185 190  
 Phe Ser Leu Leu Phe Gly Phe Gln Ser Xaa Ile Pro Thr Leu Tyr Tyr  
 195 200 205  
 Tyr Met Asp Lys Lys Ser Trp Arg Cys  
 210 215

&lt;210&gt;1240

&lt;211&gt;115

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1240

Leu Val Ser Ser Phe Val Gly Val Ala Leu Gly Val Met Asp Phe Leu  
 1 5 10 15  
 Ala Asp Gly Leu Lys Trp Asn Lys Lys Ser His Pro Phe Ser Ile Phe  
 20 25 30  
 Phe Leu Thr Phe Ile Ile Pro Leu Ala Trp Ala Val Cys Tyr Pro Glu  
 35 40 45  
 Ile Val Leu Thr Cys Leu Lys Tyr Ala Gly Gly Phe Gly Ala Ala Val  
 50 55 60  
 Ile Ile Gly Val Phe Pro Thr Leu Ile Val Trp Lys Gly Arg Tyr Gly  
 65 70 75 80  
 Lys Gln His His Arg Glu Lys Gln Leu Val Pro Gly Gly Lys Phe Ala  
 85 90 95  
 Leu Phe Leu Met Phe Leu Leu Ile Val Ile Asn Val Val Ser Ile Tyr  
 100 105 110  
 His Glu Leu  
 115

&lt;210&gt;1241

&lt;211&gt;105

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1241

Leu Phe Pro Leu Val Leu Ala Trp Val Ile Arg Tyr Gln Leu His  
 1 5 10 15  
 Ala Asn Phe His Cys Ser Val Val Pro Phe Pro Gly Phe Ser Val Asn  
 20 25 30  
 Gln Ala Tyr Lys Cys Ser Glu Ala Lys Ile Glu Glu Met Leu Asp Leu  
 35 40 45  
 Leu Asp Leu Glu Thr Leu Glu Trp Ser Ser Arg Cys Leu Arg Gln Asp  
 50 55 60  
 Met Thr Phe Ala Asn Arg Leu Glu Glu Leu Ile Gln Glu Leu Arg

65	70	75	80
Val Ser Glu Thr Glu Glu Leu Ile Ser Leu Gly Gly Lys Arg Asn Leu			
85	90	95	
Val Arg Leu Leu Leu Thr His Ser Phe			
100	105		
<210>1242			
<211>158			
<212>PRT			
<213>Chlamydia pneumoniae			
<400>1242			
Met Arg Val Ile Phe Pro Asp Lys His Asn Asn Phe Pro Asn Leu Ser			
1	5	10	15
Lys Leu Leu Lys Lys Leu Pro Ser Val Ile Leu Val Thr Ser Cys Ile			
20	25	30	
Ala Pro Phe Phe Ser Tyr Ile Ile Asn Lys Phe Phe Gly Ile Pro Gly			
35	40	45	
Leu Leu Glu Ile Leu Ala Leu Ser Val Lys Gly Ile Gln Lys His His			
50	55	60	
Phe Trp Gln Phe Leu Thr Tyr Pro Leu Ile Thr Ala Asp Ser Leu Ser			
65	70	75	80
Leu Asn Lys Asp Gln Ser Phe Glu Ile Thr Gln Arg Leu Leu Leu Arg			
85	90	95	
Asn Val Leu Asp Phe Phe Leu Phe Tyr Lys Ala Ile Gln His Leu Ile			
100	105	110	
Arg Lys Leu Gly Ala Phe Ser Val Leu Val Val Ile Ser Gly Gln Ala			
115	120	125	
Leu Ile Ile Gly Ala Val Leu Trp Gly Phe Met Ala Leu Ile Thr Ala			
130	135	140	
Pro Asn Leu Ser Ser Val Arg Lys Val Leu Ser Val Val Phe			
145	150	155	
<210>1243			
<211>135			
<212>PRT			
<213>Chlamydia pneumoniae			
<400>1243			
Met Arg Leu Lys Asn Tyr Pro Met Ile Gln Phe Ser Phe Phe Leu Pro			
1	5	10	15
Gln Thr Cys Ile Leu Leu Leu Ala Ser Asp Ser Leu Thr Asn Ile Leu			
20	25	30	
Ala Leu His His Leu Leu Ala Asn Tyr Ser Val Lys Gln Arg Met Leu			
35	40	45	
Val Leu Leu Arg Glu Ser Phe Phe Ala Phe Ile Ala Met Phe Ala Leu			
50	55	60	
Tyr Gly Leu Ala Leu Gly Gly Leu Lys Val Leu Asn Thr Pro Val Cys			
65	70	75	80
Ala Ile Glu Val Val Gly Gly Ile Ala Val Thr Leu Ala Gly Val Arg			
85	90	95	
Ala Val Leu Arg Leu Gly Lys Glu Glu Ser Trp Ile Pro Tyr Lys Phe			
100	105	110	
Asn Met Ser Pro Ser Tyr Ser Pro Cys Ile Ser Pro Ile Ala Leu Pro			
115	120	125	
Leu Met Phe Gly Pro Ser Gly			
130	135		
<210>1244			
<211>160			
<212>PRT			
<213>Chlamydia pneumoniae			
<400>1244			
Met Lys Lys Lys Phe Ile Phe Tyr Phe Val Ile Val Phe Ser Leu Leu			
1	5	10	15
Phe Leu Trp Glu Met Thr Ser Arg His Arg Pro Thr Phe Ser Phe Phe			
20	25	30	
Cys Pro Pro Pro Ser Ser Ile Ala Ser Ser Thr Leu Gln Ser Leu Pro			
35	40	45	

Leu Leu Leu Thr Ser A Trp His Thr Leu Lys Ala Ile L ly Gly  
 50 55 60  
 Phe Phe Leu Ala Ile Thr Leu Ser Ile Val Leu Ala Thr Ile Met Leu  
 65 70 75 80  
 Ser Tyr Lys Ser Ala Lys Asp Leu Leu Gln Pro Leu Phe Ile Leu Leu  
 85 90 95  
 Gln Cys Thr Pro Met Phe Ala Leu Ala Pro Leu Ile Val Leu Trp Phe  
 100 105 110  
 Gly Trp Gly Ile Gly Ala Val Ile Val Pro Thr Ala Leu Thr Ile Phe  
 115 120 125  
 Phe Pro Leu Thr Leu Thr Ile Tyr Gln Gly Ile Leu Ser Thr Pro Glu  
 130 135 140  
 Glu Leu Ile Glu Gln Phe Val Leu Cys Gly Val Gln Asn Ser Asn Ser  
 145 150 155 160  
 <210>1245  
 <211>227  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1245  
 Met Leu Trp Gly Val Ser Met Arg Gln Ser Phe Asp Glu Leu Ser Gln  
 1 5 10 15  
 Asn Ala Phe Lys Asn Ile Phe Asn Lys Gln Arg Phe Cys Phe Ile Phe  
 20 25 30  
 Cys Ser Leu Cys Cys Phe Gly Phe Val Phe Ala Leu Phe Leu Lys Leu  
 35 40 45  
 Cys Ser Arg Leu Ala Pro Glu Ile Ser Leu Ser Thr Leu Gly Leu Gly  
 50 55 60  
 Ala Phe Phe Cys Ala Phe Ser Val Ile Cys Ala Ser Ala Ile Ile Val  
 65 70 75 80  
 Gln Phe Leu Leu His Lys Glu Ser Gln Gly Glu Thr Ser Lys Leu Cys  
 85 90 95  
 Cys Ala Ile Lys Asn Thr Trp Ser Ser Leu Trp Leu Ser Leu Leu Val  
 100 105 110  
 Ser Met Pro Phe Phe Ile Ala Met Val Ala Val Val Thr Val Ala Met  
 115 120 125  
 Leu Ser Ser Phe Leu Gly Ser Leu Pro Trp Val Gly Lys Leu Phe His  
 130 135 140  
 Thr Val Leu Ile Phe Ile Pro Tyr Leu Ser Ala Thr Ala Leu Ile Leu  
 145 150 155 160  
 Leu Phe Leu Gly Ser Phe Ser Cys Leu Phe Phe Cys Ile Pro Val Leu  
 165 170 175  
 His Asn Gln Glu Ser Ile Asp Tyr Arg Lys Leu Pro Arg Val Phe Ser  
 180 185 190  
 Trp Glu Tyr Pro Ser Ala Val Tyr Arg Gly Gly Asp Cys Phe Gly Ser  
 195 200 205  
 Xaa Ser Pro Met Gln Leu Val Ser Phe Arg Phe Phe Leu Phe Asp Asp  
 210 215 220  
 Thr Ser Cys  
 225  
 <210>1246  
 <211>78  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1246  
 Val Val Ile Ala Leu Val Pro Leu Ala Leu Cys Ser Trp Leu Ala Leu  
 1 5 10 15  
 Asp Ser Phe Tyr Leu Met Thr His Leu Val Glu Ile Ala Asp Ile His  
 20 25 30  
 Thr Trp Ser Phe Leu Ala Gln Met Phe Val Leu Ile Val Pro Ile Ala  
 35 40 45  
 Leu Ile Leu Thr Pro Ala Val Ser Phe Phe Phe Asn Phe Ser Phe Ser  
 50 55 60  
 Phe Tyr Leu Ala Lys Gln Glu Glu Lys Ala Leu Val Lys  
 65 70 75

<210>1247  
 <211>94  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1247  
 Leu Arg Ala Phe Phe Pro Val Lys Ala Trp Arg Ser Pro Glu Asp Ile  
     1              5              10              15  
 Pro Glu Ala Pro Ser Pro Lys Gly Ile Gly Ser Lys Arg Ser Ile Val  
     20              25              30  
 Ala Val Pro Trp Glu Trp Arg Ser Arg Cys Gln Val Thr Glu Ser Pro  
     35              40              45  
 Ala Tyr Pro Ala Pro Lys Thr Ala Ile Arg Ile Lys Cys Thr Leu Asn  
     50              55              60  
 Gln Val Ser Leu His Arg Pro Cys Leu Glu Asn Lys Arg Ile Arg Asp  
     65              70              75              80  
 Lys Arg Thr Gly Gly Asn Leu Ser Asp Trp Glu Ile Lys Met  
     85              90  
 <210>1248  
 <211>86  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1248  
 Met Arg Ile Ala Val Leu Gly Ala Gly Tyr Ala Gly Leu Ser Val Thr  
     1              5              10              15  
 Trp His Leu Leu Leu His Ser Gln Gly Thr Ala Thr Ile Asp Leu Phe  
     20              25              30  
 Asp Pro Ile Pro Leu Gly Glu Gly Ala Ser Gly Met Ser Ser Gly Leu  
     35              40              45  
 Leu His Ala Phe Thr Gly Lys Lys Ala Leu Lys Pro Pro Leu Val Gly  
     50              55              60  
 Ser Arg Asn Gln Cys Tyr Thr Arg Val Asn His Xaa Ala Leu Val Lys  
     65              70              75              80  
 Pro Ser Thr Tyr Leu Leu  
     85  
 <210>1249  
 <211>232  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1249  
 Leu Pro Met Asn Thr Ser His Arg Lys Thr Leu Val Phe Ser Tyr Leu  
     1              5              10              15  
 Ser Ser Thr Phe Thr Leu Leu Val Leu Ser Asn Leu Val Leu Ser  
     20              25              30  
 Ser Lys Leu Ile Pro Thr Thr Phe Phe Asn Phe Ile Ile Pro Gly Gly  
     35              40              45  
 Leu Ile Leu Tyr Pro Leu Thr Phe Leu Ile Ser Asp Val Val Asn Glu  
     50              55              60  
 Ile Phe Gly Pro Lys Lys Ala Arg Val Met Ile Phe Ser Ala Phe Ile  
     65              70              75              80  
 Ala Asn Leu Leu Ala Ser Ser Ile Val Gln Ile Phe Met Phe Phe Pro  
     85              90              95  
 Val Ala Ser Pro Glu Met Gln Thr Ala Trp His Cys Leu Phe Asp Leu  
     100            105            110  
 Ser Pro Leu Arg Phe Leu Ala Ser Leu Leu Ala Phe Ile Val Ser Gln  
     115            120            125  
 Gln Leu Asp Ile Val Leu Tyr Thr Phe Phe Lys Asn Arg Thr Pro Asn  
     130            135            140  
 Ser Ser Leu Trp Leu Arg Ser Asn Gly Ser Thr Trp Ile Ser Gln Xaa  
     145            150            155            160  
 Pro Asp Thr Phe Ile Val Asp Thr Cys Ile Leu Tyr Phe Gly Met Gly  
     165            170            175  
 Leu Ser Phe Pro Gln Thr Leu Asn Ile Met Phe Tyr Ser Tyr Ile Tyr  
     180            185            190  
 Lys Ile Thr Phe Cys Val Leu Thr Thr Pro Leu Phe Tyr Leu Ala Val

195	200	205
Asn Thr Ile Arg Lys Phe Leu Gly Met Pro Ser Thr Lys Ile Ala Asn		
210	215	220
Thr Val Pro Leu Ile Asn Gln Pro		
225	230	
<210>1250		
<211>103		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1250		
Met Thr Pro Lys Ser Ile Gln Gln Leu His Leu Ile Lys Thr Ile Asp		
1	5	10
Pro Val Arg Lys Ile Ser Pro Val Thr Thr Lys Lys Ser Ser Phe Phe		
20	25	30
Arg Gln Ser Leu Leu Arg Phe Leu Glu Leu Phe Trp Met Phe Leu Tyr		
35	40	45
Cys Ile Arg Ser Ile Arg Phe His Cys Val His Ile Ala Thr Phe Ile		
50	55	60
Cys Arg Gly Leu Ile Leu Phe Leu Thr Thr Leu Phe Leu Ser Met Ile		
65	70	75
Cys Ile Leu His Phe Ile Thr Leu Pro Trp Ile Cys Lys Glu Asp Pro		
85	90	95
Arg Ile Ile Arg Lys Asn Lys		
100		
<210>1251		
<211>79		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1251		
Leu Asn Phe Ala Lys Ile Asp His Asn His Leu Tyr Leu Thr Cys Leu		
1	5	10
Gly Asp Leu Gly Val Ala Cys Pro Ile Leu Ser Thr Asp Cys Leu Pro		
20	25	30
Asn Tyr Ser Glu Lys Ala Ser His Glu Val Leu Val Tyr Ser Lys Phe		
35	40	45
Arg Cys Ile Ser Gly Glu Pro Ser Arg Leu Ala Thr Ser Gly Asn Asp		
50	55	60
Thr Tyr Tyr Ser Ile Val Ser Leu Pro Ile Gly Leu Arg Tyr Glu		
65	70	75
<210>1252		
<211>85		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1252		
Met Val Glu Ile His His Lys Asp Pro Ser Leu Lys Lys Leu Phe Ala		
1	5	10
Leu Gln Gln Ser Leu Glu Thr Leu Asn Ser Leu Ser Asp Ile Val Ala		
20	25	30
Thr Tyr Glu Ala Met Phe Ser Leu Ile Tyr Glu Gly Leu Asn Lys Ala		
35	40	45
Leu Arg Lys Asp Gln Leu Cys Tyr Leu Leu Ser Val Asn Ser Lys Gly		
50	55	60
Glu Leu Leu Lys Ser Pro Ser Gly Asp Pro Ile Val Gln Thr Phe Pro		
65	70	75
Ile His Pro His His		
85		
<210>1253		
<211>75		
<212>PRT		
<213>Chlamydia pneumoniae		
<400>1253		
Met Glu Glu Val Pro Phe Glu Asn Ala Met Gln Arg Leu Glu Glu Ile		
1	5	10
Val Asp Leu Met Asn Gln Pro Thr Thr Ser Leu Asp Ala Ser Leu Ala		

	20	25	30												
Leu	Tyr	Glu	Glu	Ala	Asp	Ala	Leu	Met	Arg	Ile	Cys	Glu	Ser	Arg	Ile
								35	40						45
Arg	Gln	Val	Glu	Gln	Arg	Val	Arg	Glu	Leu	Ala	Glu	Lys	Arg	His	Glu
								50	55						60
Ser	Ser	Leu	Phe	Glu	Glu	Gln	Ala	Val	Val	Arg					
								65	70						75
<210>1254															
<211>126															
<212>PRT															
<213>Chlamydia pneumoniae															
<400>1254															
Met	Tyr	Ile	Ser	Ser	Ser	Phe	Ser	Ser	Ser	Ala	Lys	Val	Ser	Ala	Ile
								1	5		10				15
Cys	Leu	Ala	Ser	Ile	Cys	Ser	Lys	Val	Ser	Ser	Arg	Phe	Leu	Ser	Asn
								20	25						30
Asn	Ile	Asn	Pro	Lys	Thr	Asn	Arg	Thr	Thr	Pro	Arg	Glu	Ile	Val	Leu
								35	40			45			
Ile	Pro	Asn	Pro	Gln	Thr	Met	Ser	Ala	Leu	Asn	Pro	Glu	Ile	Thr	Pro
								50	55			60			
Leu	Ser	Thr	Ile	Ala	Pro	Gln	Thr	Thr	Arg	Arg	Met	Pro	Thr	Thr	Asn
								65	70		75				80
Lys	Val	Ile	Pro	Arg	Ala	Arg	Asp	Leu	Leu	Ser	Leu	Gly	Ile	Thr	Asn
								85	90			95			
Phe	Val	Ser	Ser	Gly	Gly	Val	Gly	Asp	Thr	Cys	Arg	Ile	Ala	Gly	Ala
								100	105			110			
Ala	Val	Met	Ile	Glu	Tyr	Gln	Asn	His	Lys	Arg	Asn	Ile	Asp		
								115	120			125			
<210>1255															
<211>81															
<212>PRT															
<213>Chlamydia pneumoniae															
<400>1255															
Met	Glu	Ser	Lys	Lys	Val	Ser	Lys	Leu	Ala	Ser	Asn	Ser	Thr	Phe	Phe
								1	5		10				15
Leu	Ala	Ser	Val	Ser	Cys	Leu	Gly	Ser	Thr	Val	Pro	Pro	Tyr	Arg	Ala
								20	25				30		
Leu	Arg	Ser	Leu	Thr	Arg	Val	Ser	Thr	Ser	Ser	Cys	Phe	Phe	Arg	Lys
								35	40			45			
Asn	Phe	Val	Leu	Ala	Ser	Ser	Arg	Arg	Ser	Thr	Lys	Ser	Asp	Lys	Ser
								50	55		60				
Phe	Leu	Phe	Ala	Ser	Val	Asp	Ser	Phe	Glu	Leu	Ser	Ser	Arg	Ser	Phe
								65	70		75				80
Ser															
<210>1256															
<211>80															
<212>PRT															
<213>Chlamydia pneumoniae															
<400>1256															
Leu	Leu	Gly	Met	Cys	Thr	Leu	Leu	Ile	Pro	Lys	Gln	Leu	Arg	Leu	
								1	5		10			15	
Leu	Ile	Leu	Thr	Lys	Cys	Leu	Ser	Ile	Thr	Leu	Ser	His	Thr	Leu	Ile
								20	25		30				
His	Thr	Arg	Leu	Gln	Gly	Ser	Lys	Cys	Leu	Phe	Lys	Gly	Arg	Leu	Arg
								35	40		45				
His	Thr	Ile	Asn	Met	Pro	Ile	Lys	Ser	His	Gly	Tyr	Leu	Pro	Tyr	Val
								50	55		60				
Thr	Ser	Arg	Ser	His	Lys	Ala	Ile	His	Asn	Leu	Thr	Ser	Arg	Phe	Leu
								65	70		75			80	
<210>1257															
<211>87															
<212>PRT															
<213>Chlamydia pneumoniae															

&lt;400&gt;1257

Gly Ser Thr Phe Ala Asn Leu Ser Leu His Leu Leu Tyr Cys Thr Lys  
 1 5 10 15  
 Ala Leu Val Asn Ala Cys Phe Ile Gly Trp Ser Gly Arg Ser Ala Ile  
 20 25 30  
 Arg Ser Ile Ile Ser Ile Ser Ser Thr Arg Gly Arg Val Ser Ser Ile  
 35 40 45  
 Ser Ser His Lys Thr Leu Arg Arg Phe Ala Ala Ser Glu Ser Met Val  
 50 55 60  
 Tyr Ser Ile Ser Ser Val Ala Ser Leu Ser Thr Pro Lys Ala Lys Val  
 65 70 75 80  
 Ser Ala Phe Asp Asn Leu Leu  
 85

&lt;210&gt;1258

&lt;211&gt;81

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1258

Met His Pro His Ser Lys Cys Arg Phe Leu Gly Phe Ser Cys Phe Lys  
 1 5 10 15  
 Lys Leu Ser Ile Ala Gly Thr Asn Val Leu Leu Ile Lys Glu Asp Phe  
 20 25 30  
 Pro Asp Pro Glu Thr Pro Val Thr Pro Ile Ser Arg Ala Asn Gly Arg  
 35 40 45  
 Arg Ile Glu Arg Phe Leu Arg Leu Trp Ile Val Ala Ser Val Ser Lys  
 50 55 60  
 Ser Gln Asp Val Gly Ala Ser Arg Asp Ser Gly Met Gly Met Val Ser  
 65 70 75 80  
 Ser

&lt;210&gt;1259

&lt;211&gt;107

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1259

Met Ile Ala Pro Ser Leu Pro Ala Leu Leu Ala Ile Cys Phe Asn Gly  
 1 5 10 15  
 Ala Val Asn Ala Phe Arg Ile Ile Arg Val Pro Ile Ala Ser Ser Ser  
 20 25 30  
 Phe Ala Ser Ile Gly Arg Lys Ala Ser Ser Val Gly Ile Gln Arg Thr  
 35 40 45  
 Lys Ala Val Pro Pro Pro Gly Arg Ile Pro Ser Ser Thr Ala Ala Met  
 50 55 60  
 Val Ala Cys Cys Ala Ser Ser Thr Leu Ser Phe Phe Ser Phe Ile Ser  
 65 70 75 80  
 Ile Ser Val Ala Ala Pro Thr Arg Ile Thr Ala Thr Pro Pro Glu Ser  
 85 90 95  
 Leu Ala Lys Arg Ser Trp Ser Phe Ser Leu Ser  
 100 105

&lt;210&gt;1260

&lt;211&gt;76

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1260

Leu Pro Pro Ala Leu Gln Val Leu Tyr Met Lys Ser Leu Asp Asn Ala  
 1 5 10 15  
 Asn Leu Glu Ile Leu His Lys Ile Phe Gln Val Gln Val Glu Ala Asn  
 20 25 30  
 Glu Leu Pro Leu Gln Met Leu His Glu Thr Thr Pro Lys Ala Leu Leu  
 35 40 45  
 Gln Gly His Ala Ala Phe Ser Asp Gln Asn Glu Leu Leu Glu Ile Ser  
 50 55 60  
 Tyr Thr Tyr His Lys Leu Thr Ser Tyr Lys Glu Ala  
 65 70 75

<210>1261  
<211>76  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1261

Met	Cys	Asn	Arg	Cys	Lys	Asp	Ser	Ser	Thr	Ser	Leu	Val	Phe	Ser	Thr
1									10						15
Cys	Leu	Gly	Thr	His	Lys	Thr	Glu	Thr	Pro	Ser	Phe	Ile	Asn	Phe	Cys
									25						30
Thr	Thr	Gly	Ser	His	Phe	Pro	Ala	Ser	Leu	Leu	Cys	Ile	Glu	Pro	Arg
									40						45
Ile	Thr	Asn	Phe	Glu	Ser	Val	Gly	Asn	Leu	Lys	Arg	Ser	Leu	Gln	Val
									55						60
Ser	Leu	Ser	Lys	Cys	Ser	Ala	Val	Cys	Ala	Ala	Thr				
									70						75

<210>1262  
<211>80  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1262

Met	Leu	Asn	His	Gln	Gln	His	Lys	Val	Val	Ser	Ile	Ser	Gln	Phe	His
1										10					15
Gln	Gln	Arg	Gln	Leu	Val	His	Lys	Lys	Asn	Trp	Arg	Arg	Gly	Ser	Thr
									25						30
Thr	His	Lys	Glu	Cys	Ala	Thr	Asp	Ala	Lys	Ile	Leu	Gln	His	Pro	Trp
									40						45
Ser	Phe	Gln	Arg	Val	Leu	Ala	Pro	Ile	Lys	Leu	Arg	Pro	Pro	Leu	Leu
									55						60
Leu	Ile	Ser	Ala	Leu	Gln	Glu	Ala	Ile	Phe	Leu	His	His	Phe	Tyr	Ala
									70						80

<210>1263  
<211>112  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1263

Met	Ile	Arg	Leu	Trp	Ser	Cys	Ser	Ser	Ile	Lys	Ile	Glu	Thr	Val	Pro
1										10					15
Tyr	Ser	Lys	Glu	Ile	Ala	Tyr	Cys	Arg	Trp	Tyr	Ser	Asn	Thr	Thr	Leu
									20			25			30
Ser	Tyr	Trp	Ile	Leu	Ile	Arg	Glu	Lys	Cys	Arg	Pro	Thr	Lys	Ser	
									35			40			45
Ala	Ser	Ser	Arg	Phe	Leu	Thr	Lys	Asn	Asn	Asn	Ile	Val	His	His	Met
									50			55			60
Ser	Ser	Gln	Lys	Leu	Phe	Ala	Phe	Gln	Ala	Lys	Ile	Phe	Val	Ala	Phe
									65			70			80
Phe	Phe	Gln	Lys	Asn	Ile	Phe	Tyr	Gln	Phe	Phe	Phe	Phe	Arg	Met	Thr
									85			90			95
Cys	Lys	Val	Lys	Arg	Ser	Ile	Phe	Gln	Glu	Glu	Phe	Cys	Arg	Pro	Ile
									100			105			110

<210>1264  
<211>148  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1264

Ser	Gly	Arg	Ile	Ile	Ser	Val	Met	Leu	Ser	Ala	Pro	Pro	Cys	Glu	Leu
1										10					15
His	Ser	Asp	Leu	Ile	Asp	Pro	Asp	Leu	Phe	Glu	Phe	Asn	His	Arg	Leu
									20			25			30
Asn	Ile	Cys	Ile	Ser	Ala	Glu	Val	Arg	Gly	Arg	Val	Thr	Thr	His	Thr
									35			40			45
Phe	Arg	Gly	Asp	Ser	Cys	Asn	Met	Ser	Phe	Asn	Cys	Ser	Val	Arg	Gly
									50			55			60
Asn	Val	Ile	Thr	Ile	Pro	Arg	Ile	Ile	Arg	Ile	Glu	Ile	Arg	Ser	Leu
									65			70			80

Thr Ser Ser Phe Ser Ile Ile Thr Lys Cys Lys Arg Ile Ser Ser Arg  
                   85                  90                  95  
 Leu Arg Ile Thr Asn Ile Ile Ala Tyr Trp Ser Leu Arg Tyr Val Cys  
                   100              105                  110  
 Leu Arg Ile Asp Ile Lys Thr Val Arg Glu Cys Ser Ser Ile Lys Leu  
                   115              120                  125  
 Arg Thr Phe Arg Arg His Ile Thr Leu His Asn Lys Phe Thr Trp Arg  
                   130              135                  140  
 Ser Arg Gly Ile  
   145  
 <210>1265  
 <211>130  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1265  
 Ser Phe Phe Ser Phe Arg Lys Val Pro Asn Phe Ser Asn Gln Pro Met  
   1              5                  10                  15  
 Cys Phe Leu Ile Arg Ser Cys Trp Ser Ala Ser Ile Asn Ala Trp Arg  
   20              25                  30  
 Gly Asp Arg Phe Cys Asp Ser Ser Leu Ser Asn His Asp His Met Val  
   35              40                  45  
 Cys Asn Arg Asn Met Pro Ser Asn Ser Gly Leu Pro Ser Asn Asp Asp  
   50              55                  60  
 Met Phe Thr Asn Phe Cys Arg Thr Cys Asn Ala Cys Leu Gly Asn Asn  
   65              70                  75                  80  
 Asn Thr Met Leu Ser Asn Phe Tyr Val Met Ser Tyr Leu Tyr Leu Val  
   85              90                  95  
 Ile Tyr Phe Ser Ser Phe Met Asp His Gly Val Leu Glu Ser Thr Thr  
   100            105                  110  
 Ile Tyr Arg Ser Val Gly Ser Asp Phe Tyr Ile Ile Thr Tyr Asn His  
   115            120                  125  
 Ile Ala  
   130  
 <210>1266  
 <211>78  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1266  
 Glu Ala Val Phe Val Ser Gly Lys Asp Gly Val Arg Gly Met Ile  
   1              5                  10                  15  
 Phe Val Pro Leu Ser Ile Leu Val Leu Ile Phe Leu Pro Leu Pro Gln  
   20              25                  30  
 Ile Leu Leu Asp Phe Gly Leu Cys Ile Ser Phe Ala Leu Ser Leu Leu  
   35              40                  45  
 Thr Val Cys Trp Val Phe Thr Leu Asn Ser Ser Asn Ser Ala Lys Phe  
   50              55                  60  
 Phe Leu His Phe Ser Tyr Ile Phe Ala Tyr Cys Gly Trp Asp  
   65              70                  75  
 <210>1267  
 <211>74  
 <212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1267  
 Leu Cys Thr Asp Ser Thr Ser Ile Ser Cys Cys Ser Ile Ile Ile Glu  
   1              5                  10                  15  
 Gly Cys Asn Ser Trp Val Val Phe Tyr Arg Thr Thr Asn Ala Ile Asp  
   20              25                  30  
 Ser Pro Ser Arg Gly Met Val Ser Arg Asp Val Arg Phe His Gly Lys  
   35              40                  45  
 Ile Ile Val Glu Asp His Arg Thr Gly Ile Leu Cys Lys Asn Ala Leu  
   50              55                  60  
 Leu Met Tyr Ser Tyr Cys Thr Thr Gln Thr  
   65              70  
 <210>1268

<211>90  
<212>PRT  
<213>Chlamydia pneumoniae  
<400>1268

Met	Gly	Ala	Glu	Ile	Glu	Ile	Ser	Gly	Val	Leu	Asp	Ser	Glu	Leu	Ser
1				5					10					15	
Leu	Val	Leu	Ala	Pro	Cys	Leu	Cys	Ala	His	Pro	Thr	Lys	Ala	Phe	Ile
		20						25					30		
Asn	Gly	Glu	Ser	Ser	Arg	Gly	Leu	Pro	Phe	Leu	Arg	Gly	Thr	Ser	Cys
	35						40					45			
Gly	Glu	Pro	Val	Leu	Ser	Val	Ser	Ser	Ile	Ser	Glu	Gly	Asp	Pro	Thr
	50					55					60				
Asp	Ile	Glu	Ser	Ser	Ser	Glu	Glu	Val	His	Ser	Ser	Pro	Arg	His	Val
	65				70				75				80		
Gln	Gln	Arg	Pro	Thr	Ala	Ser	Ala	Ala							
					85				90						

&lt;210&gt;1269

&lt;211&gt;184

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1269

Phe	Phe	Val	Phe	Thr	His	Val	Trp	Tyr	Leu	Ile	Ser	Arg	Gly	Tyr	Phe
1				5					10					15	
Tyr	Ser	Leu	Phe	Ser	Leu	Gly	Val	Gly	Ala	Leu	Ala	Thr	Leu	Thr	Leu
					20			25					30		
Ala	Thr	Arg	Ile	Gly	Arg	Ser	Pro	Ile	Leu	Tyr	Pro	Phe	Ala	Asn	Ser
	35					40						45			
Ser	Lys	Ile	Val	Pro	Ser	Gly	Thr	Ser	Glu	Val	Ser	Ser	Val	Cys	Thr
	50					55					60				
Ala	Ser	Cys	Arg	Lys	Gly	Leu	Asn	Phe	Trp	Pro	Ile	Glu	Glu	Tyr	Ser
	65					70			75				80		
Ile	Ile	Pro	Phe	Ser	Ser	Lys	Ile	Cys	Leu	Asn	Trp	Leu	Arg	Ile	Met
						85			90				95		
Leu	Asn	Pro	Arg	Ala	Gln	Phe	Phe	Thr	Ser	Ser	Asp	Ile	Cys	Val	Ala
		100					105					110			
Asn	Pro	Arg	Ala	Phe	Ser	Met	Leu	Ser	Met	Gly	Leu	Arg	Lys	Ser	Ile
		115				120					125				
Lys	Val	Phe	Ser	Lys	Ala	Tyr	Cys	Ile	Ser	Ser	Trp	Arg	Ser	Phe	Cys
	130					135					140				
Lys	Arg	Phe	Leu	Glu	Phe	Ser	Asp	Ser	Ala	Arg	Ala	Met	Arg	Tyr	Leu
	145				150				155				160		
Ser	Phe	Phe	Ser	Phe	Asn	Ser	Val	Phe	Arg	Val	Thr	Ile	Ser	Cys	Cys
					165				170				175		
Lys	Cys	Ser	Thr	Ser	Phe	Ser	Phe								
			180												

&lt;210&gt;1270

&lt;211&gt;98

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1270

Leu	Ile	Ser	Val	Glu	Glu	Thr	Pro	Glu	Ser	Ser	Ile	Phe	Ser		
1				5				10					15		
Ala	Ala	Ser	Leu	Ser	Leu	Cys	Lys	Ala	Ile	Leu	Ser	Leu	Leu	Arg	Ser
					20			25					30		
Met	Pro	Ser	Cys	Phe	Leu	Asn	Ser	Ser	Ile	Ile	His	Leu	Ile	Met	Thr
					35			40					45		
Ser	Ser	Lys	Ser	Ser	Pro	Pro	Arg	Arg	Val	Ser	Pro	Phe	Val	Asp	Arg
		50				55					60				
Thr	Ser	Lys	Thr	Pro	Ser	Pro	Ile	Ser	Arg	Met	Glu	Ile	Ser	Lys	Val
	65				70				75				80		
Pro	Pro	Pro	Arg	Ser	Lys	Thr	Ala	Ile	Phe	Leu	Ser	Pro	Thr	Leu	Ser
					85				90				95		
Ile	Pro														

&lt;210&gt;1271

&lt;211&gt;78

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1271

Phe	Leu	Lys	Thr	Met	Thr	Lys	Gly	Phe	Ala	Phe	Cys	Ser	Ala	Ser	Phe
1															
															15
Pro	Ile	Ala	Ile	Ile	Glu	Asn	Val	Val	Ser	Lys	Ser	Val	Glu	Gly	Val
															30
Ser	His	Pro	Glu	Gly	Glu	Asn	Ala	Asn	Pro	Ser	Leu	Leu	Ser	Leu	Val
															45
Met	Ala	Ser	Trp	Thr	Leu	Gly	Gly	Thr	Ser	Thr	Ser	Leu	Asn	Lys	
															50
Ala	Leu	Ala	Lys	Val	Leu	Ile	Ser	Ser	Gly	Asp	Val	Phe	Pro		
															65
															70
															75

&lt;210&gt;1272

&lt;211&gt;122

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1272

Met	Thr	Thr	Gly	Ser	Cys	Ser	Pro	Ser	Lys	Ala	Leu	Phe	Val	Cys	Ile
1															15
															10
Asn	Cys	Ile	Ala	Phe	Ile	Glu	Met	Ser	Thr	Asn	Thr	Thr	Glu	Ala	Ala
															30
Pro	Arg	Leu	Arg	Ala	Ser	Lys	Pro	Ile	Ala	Pro	Ile	Pro	Ala	Lys	Arg
															35
Ser	Lys	Lys	Ala	Ala	Pro	Ser	Ile	Ser	Ser	Leu	Gln	Ile	Leu	Lys	Asn
															50
															55
															60
Ala	Ser	Phe	Thr	Lys	Pro	Glu	Val	Gly	Arg	Ile	Cys	Gly	Leu	Glu	Asn
															65
Val	Phe	Lys	Asp	Phe	Pro	Leu	Tyr	Leu	Pro	Ala	Lys	Ile	Leu	Thr	Ser
															85
Pro	Leu	Glu	Glu	Gln	Ser	Leu	Arg	Asn	Gln	Gln	Pro	Leu	Val	Cys	Ser
															100
															105
Gly	Ser	Leu	Gly	Tyr	Tyr	Arg	Ile	His	Leu						
															115
															120

&lt;210&gt;1273

&lt;211&gt;112

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1273

Phe	Thr	Phe	Phe	Leu	Ala	Gln	Leu	Glu	Lys	Gln	Leu	Pro	His	Leu	
1															15
															10
Val	Leu	Phe	Phe	Phe	Ser	Ala	Thr	Ser	Ser	Leu	Arg	Ala	Ser	Phe	
															20
Ile	His	Ser	Ser	Leu	Trp	Ser	Arg	Val	Phe	Ser	Ser	Ser	Phe	Leu	Arg
															35
Phe	Ala	Lys	Phe	Thr	Ser	Ala	Phe	Ser	Ser	Leu	Glu	Ala	Ala	Ser	
															50
Thr	Thr	Ser	Phe	Cys	Leu	Leu	Thr	Phe	Ser	Ser	Ser	Glu	Ser	Cys	
															65
Thr	Ala	Thr	Thr	Leu	Met	Tyr	Asp	Phe	Ile	Cys	Lys	Thr	Ala	Ser	Leu
															85
Val	Val	Pro	Ser	Ser	Asn	Lys	Ser	Arg	Ser	Cys	Trp	Ile	Phe	Cys	Ile
															100
															105
															110

&lt;210&gt;1274

&lt;211&gt;82

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1274

Leu	Ser	Ala	Lys	Leu	Met	Lys	Thr	Ser	Leu	Gly	Val	Cys	Val	Gly	Ile
1															15
															5
Ala	Gly	Ile	Ser	Lys	Gly	Arg	Cys	Leu	Ile	Asn	Ala	Lys	Ser	Pro	Phe
															20
															25
															30

Ser Leu Lys Ile      Glu Arg Ser Glu Arg Glu Arg Trp Arg Ser  
          35                  40                  45  
 Tyr Val Tyr Ser Val Asp Val Gly Pro Gly Val Phe Leu Met Met Thr  
          50                  55                  60  
 Ser Lys Arg Glu Arg Leu Phe Pro Arg Arg Ile Ala Val Thr Thr Pro  
          65                  70                  75                  80  
 Glu Thr

&lt;210&gt;1275

&lt;211&gt;134

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1275

Met Asn Ser Pro Thr Ile Lys Asp Pro Ser Leu Glu Thr Ala Cys Ala  
          1                5                10                15  
 Asp Asp Leu Leu Ala Pro Gly Ile Leu Glu Ser Arg Cys Cys Ser Pro  
          20                25                30  
 Ser Phe Gln Tyr Thr Ala Leu Ala Ile Ser Ser Leu Pro Met Ala Ser  
          35                40                45  
 Pro Thr Ile Thr Glu Pro Ser Ser Glu Ala Ser Gln Ala Gln Glu Cys  
          50                55                60  
 Arg Ser Ser Gly Lys Leu Gly Arg Thr Thr Ile Pro Val Ser Ser His  
          65                70                75                80  
 Phe Thr Ala Lys Phe Val Ser Val Ser Ser Leu Tyr Arg His Pro Thr  
          85                90                95  
 Ile Val Phe Pro Ser Leu Glu Thr Pro Ser Ala Lys Asp Cys Ile Pro  
          100                105                110  
 Ser Glu Asn Ile Pro Arg Ser Thr Ser Ala Pro Phe Thr His Phe Thr  
          115                120                125  
 Ala Arg Gln Asp Gly Ser  
          130

&lt;210&gt;1276

&lt;211&gt;84

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1276

Met Arg Ser Trp Thr Arg Trp Thr Arg Cys Gly Ser Cys Cys Arg Cys  
          1                5                10                15  
 Ser Gly Ser Trp Arg Cys Ser Arg Ser Cys Cys Arg Asn His Gly Ser  
          20                25                30  
 Asn Thr Asn Tyr Ser Ser Ser Cys Cys Pro Ser Gly Glu Thr Ser Cys  
          35                40                45  
 Tyr His Ser Cys Gln Thr Ser Asp His Arg Gly Tyr Lys Ser Gly Cys  
          50                55                60  
 Gln Ile Trp Asn Lys Ser Ile Tyr Gln Asn Phe Ser Gln Ser Asp Cys  
          65                70                75                80  
 Gln Ser His Phe

&lt;210&gt;1277

&lt;211&gt;76

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1277

Met Arg Glu Phe Ser Cys Ile Lys Asp Arg Lys Asn Arg Cys Phe Arg  
          1                5                10                15  
 Ala Ala Ala Val Lys Ile Met Cys Thr Pro Ser Arg Ser Ser Ala Arg  
          20                25                30  
 Thr Thr Arg Pro Lys Glu Val Lys Lys Arg Thr Ser Leu Glu Tyr Ile  
          35                40                45  
 Gln Ser Ile Trp Asp Leu Gly Pro Leu Asp Val Tyr Ser Cys Phe Ser  
          50                55                60  
 Lys Glu Thr Ser Ser Glu Leu Tyr Ala Lys Arg Phe  
          65                70                75  
<210>1278

&lt;211&gt;78

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1278

Met	Met	Ile	Val	Arg	Cys	Cys	Phe	Arg	Ala	Leu	Leu	Cys	Phe	Ser	Met
1					5				10					15	
Cys	Ser	Arg	Thr	Ser	Arg	Pro	Arg	Ser	Pro	Ile	Lys	Ala	Ile	Thr	Leu
			20					25						30	
Ile	Val	Asp	Phe	Asp	Pro	Lys	Ala	Ile	Ala	Glu	Ser	Ser	Glu	Asp	Phe
			35			40			45						
Pro	Leu	Pro	Gly	Ser	Glu	Lys	Thr	Pro	Ile	Arg	Cys	Pro	Phe	Pro	Lys
	50				55				60						
Val	Arg	Asn	Ala	Ser	Ile	Ala	Leu	Ile	Pro	Val	Gly	Lys	Ile		
	65				70				75						

&lt;210&gt;1279

&lt;211&gt;86

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1279

Met	Arg	Arg	Ile	Phe	Pro	Thr	Ser	Ile	Leu	Leu	Ile	Ala	Thr	Phe	Cys
1					5				10					15	
Lys	Leu	Pro	Ser	Ser	Lys	Thr	Ser	Gln	Pro	Val	Val	Gly	Ala	Ser	Cys
					20			25					30		
Phe	Lys	Glu	Thr	Lys	Val	Leu	Phe	Ala	Phe	Pro	Asp	Thr	Ile	Cys	Pro
					35			40			45				
Asn	Ala	Ser	Glu	Ile	Ala	Asn	Lys	Thr	Arg	Ser	Lys	Ala	Pro	Ser	Lys
	50					55			60						
Ala	Pro	Pro	Ile	Lys	Ile	Glu	Pro	Lys	Gly	Ala	Asp	Val	Ile	Lys	Ile
	65					70			75			80			
Ser	Met	Phe	Thr	Thr	Phe										
					85										

&lt;210&gt;1280

&lt;211&gt;124

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1280

Val	Lys	Gly	Val	Leu	Lys	Arg	Gln	Arg	Leu	Ser	Leu	Thr	Met	Gly	Gly
1					5				10					15	
Arg	Ser	Lys	Leu	Lys	Arg	Arg	Ser	Trp	Leu	Lys	Ala	Ala	Gln	Thr	Thr
					20			25					30		
Pro	Val	Val	Cys	Trp	Arg	Arg	Asn	Val	Ile	Phe	Ser	Thr	Val	Ile	Phe
					35			40			45				
Ser	Pro	Ala	Ile	Ile	Arg	Ser	Pro	Ser	Ser	Leu	Glu	Ala	Ser	Ser	
					50			55			60				
Thr	Thr	Ile	Thr	Asn	Phe	Pro	Ala	Leu	Lys	Ser	Ser	Ile	Ala	Arg	Ser
					65			70			75			80	
Lys	Glu	Thr	Lys	Phe	Ala	Glu	Pro	Thr	Ser	Ser	Arg	Val	Ser	Ile	Ile
					85				90			95			
Asp	Ser	Leu	Ala	Leu	Thr	Asp	Ser	Asp	Ala	Lys	His	Ala	Thr	Leu	Lys
					100			105			110				
Ile	Leu	Ser	Phe	Gln	Phe	Leu	Met	Gly	Ser	Lys	Thr				
					115			120							

&lt;210&gt;1281

&lt;211&gt;85

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1281

Ile	Gln	Arg	Thr	Leu	Cys	Leu	Leu	Phe	Phe	Lys	Lys	Phe	Ile	Leu	Leu
1					5				10				15		
Ile	Leu	Val	Arg	Thr	Leu	Arg	Phe	Pro	Ile	Leu	Thr	Phe	Leu	Ser	Trp
					20			25				30			
Leu	Asn	Phe	Arg	Leu	Lys	Leu	Ile	Phe	Ser	Leu	Ile	Leu	Tyr	Gly	Leu
					35			40			45				
Ala	Asn	Val	Ala	Gln	Leu	Val	Arg	Ala	Ser	Asp	Cys	Gly	Ser	Glu	Gly

50	55	60													
Arg	Gly	Phe	Lys	Pro	Arg	Arg	Ser	Pro	Ser	Leu	Ser	Ser	Leu	Phe	Leu
65				70					75					80	
Leu	Phe	Phe	Leu	Ile											
				85											
<210>1282															
<211>112															
<212>PRT															
<213>Chlamydia pneumoniae															
<400>1282															
Val	Leu	Tyr	Asn	Pro	Lys	Ala	Phe	Ile	Thr	His	Ala	Ala	Ser	Leu	Arg
1					5				10					15	
Gln	Thr	Phe	Val	His	Cys	Glu	Arg	Phe	Ser	Thr	Ala	Ala	Ser	Arg	Arg
					20				25					30	
Ser	Leu	Gly	Ser	Val	Ser	Val	Pro	Val	Leu	Ala	Val	Asn	Leu	Ser	Ile
					35				40					45	
Arg	Leu	Asp	Val	Ile	Ala	Leu	Val	Gly	Phe	Tyr	Pro	Thr	Asn	Lys	Leu
					50				55					60	
Ile	Ser	His	Lys	Leu	Phe	Leu	Asn	Arg	Lys	Val	Arg	Arg	Ser	Pro	Ser
					65				70					80	
Leu	Ile	Tyr	Ile	Arg	Cys	Leu	Ile	Thr	Leu	His	Ser	Val	Leu	Ala	Ile
					85				90					95	
Val	Ser	Asn	Arg	Tyr	Pro	Gln	Val	Glu	Gly	Arg	Leu	Ser	Met	Tyr	Tyr
					100				105					110	
<210>1283															
<211>77															
<212>PRT															
<213>Chlamydia pneumoniae															
<400>1283															
Leu	Glu	Ser	Gly	Leu	Pro	Arg	Phe	Arg	Leu	Gly	Phe	Thr	Cys	Leu	Ala
1					5				10					15	
Leu	Leu	Arg	Tyr	Arg	Leu	Ala	Ser	Phe	Val	Phe	Ser	Phe	Thr	Gly	Leu
					20				25					30	
Ser	Pro	Cys	Ile	Val	Gln	Leu	Ser	Arg	Ser	Ile	Gln	Leu	Lys	Leu	Lys
					35				40					45	
Ile	Pro	Cys	Tyr	Arg	Pro	Tyr	Asn	Pro	Ile	Leu	Lys	Ile	Trp	Phe	Arg
					50				55					60	
Leu	Phe	Pro	Phe	Arg	Ser	Pro	Leu	His	Arg	Glu	Ser	Leu			
					65				70					75	
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<211>85															
<212>PRT															
<213>Chlamydia pneumoniae															
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Met	Ile	Tyr	Gln	Asn	Gly	Ile	Gly	Val	Trp	Asn	Ile	Asn	Pro	Val	Phe
1						5			10					15	
Tyr	Gln	Cys	Ser	Ser	Asn	Glu	Asp	Val	Gly	Phe	Leu	Ile	Phe	Glu	Phe
						20			25					30	
Arg	Lys	Asp	Ile	Arg	Glu	Val	Leu	Ser	Ser	His	Leu	Thr	Met	Ser	Tyr
						35			40					45	
Ala	Asn	Thr	Ser	Leu	Arg	Asn	Gln	Ile	Ala	Asn	Gly	Leu	Ser	Lys	Ser
						50			55					60	
Ile	Asp	Ala	Leu	Asn	Pro	Ile	Met	Asn	Asp	Ile	Gly	Leu	Ser	Ser	Ser
						65			70					80	
Lys	Glu	Leu	Val	Pro											
					85										
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<212>PRT															
<213>Chlamydia pneumoniae															
<400>1285															
Val	Lys	Leu	Lys	Leu	Phe	Ser	Val	Ile	Ala	Cys	Ile	Thr	Phe	Gln	Lys
1					5				10					15	
Arg	Asp	Thr	Leu	Cys	Ser	Ile	Tyr	Thr	Ile	Gly	Asp	Phe	Leu	Gln	Ile

20	25
Gln Ser Ile Asp Ser Ile Trp Val Met Asp Gln Asn Asn Leu Phe Phe	
35	40
Tyr Lys Pro Trp Lys Lys Gly Lys Ser His Lys Asn Asn Cys Ile Leu	
50	55
Gln Gly Phe Leu Gly Ile Asn Gly Phe Cys Leu His Glu Glu Ser Leu	
65	70
Ser Cys Pro Arg Cys Ala Arg Thr Tyr His Trp Ile Phe Arg	
85	90

&lt;210&gt;1286

&lt;211&gt;74

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1286

Met Gln Gln Ser Val Arg Lys Leu Phe Gly Thr Asp Gly Val Arg Gly			
1	5	10	15
Arg Ala Asn Phe Glu Pro Met Thr Val Glu Thr Thr Val Leu Leu Gly			
20	25	30	
Lys Ala Val Ala Arg Val Leu Arg Glu Gly Arg Ser Gly Lys His Arg			
35	40	45	
Val Val Val Gly Lys Asp Thr Arg Leu Ser Gly Tyr Met Phe Glu Asn			
50	55	60	
Ala Leu Ile Ala Gly Ser Ile Leu Trp Gly			
65	70		

&lt;210&gt;1287

&lt;211&gt;88

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1287

Val His Phe Ser Asn Ser Ser Pro Phe Asn Val Trp Thr Leu Trp Leu			
1	5	10	15
Ala Ala Cys Cys Thr Leu Ile Ala Arg Asn His Asn Thr Leu Ile Asn			
20	25	30	
Phe Gln Ile Leu Ile Leu Ser Trp Leu Leu Ile Thr Leu Ala Thr Phe			
35	40	45	
Ser Leu Gln Ile Phe Cys Lys Gly Asn Lys Val Leu Leu Ala Thr Gln			
50	55	60	
Thr Val Leu Gly Leu Phe Val Thr Ile Val Gly Thr Gln Leu Leu Val			
65	70	75	80
Ser Gly Leu Gln Gln Ala Phe Leu			
85			

&lt;210&gt;1288

&lt;211&gt;119

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1288

Met Phe Arg Arg Lys Leu Ser Ile Leu Phe Gln Leu Ser Leu Thr Ser			
1	5	10	15
Ser Met Val Arg Val Thr Ser Ser Cys Leu Ile Leu Lys Thr Ser Phe			
20	25	30	
Leu Tyr Ser Ala Thr Ala Arg Thr Ala Leu Ser Asp Asn Ser Cys Thr			
35	40	45	
Leu Glu Ala Ala Ser Val Ser Cys Asp Arg Glu Val Lys Thr Phe Pro			
50	55	60	
Ile Pro Leu Lys Lys Val Phe Ala Val Ala Ser Leu Asn Leu Pro Glu			
65	70	75	80
Ile Leu Trp Thr Asn Pro Lys Met Leu Ser Pro Glu Ile Ser Pro Thr			
85	90	95	
Ile Gly Ala Ile Ala Pro Lys Ile Pro Asn Val Ala Val Ala Ile Pro			
100	105	110	
Ser Gln Arg Ala Tyr Leu Ala			
115			

&lt;210&gt;1289

&lt;211&gt;126

<212>PRT  
 <213>Chlamydia pneumoniae  
 <400>1289  
 Met Val Ile Ile Phe Arg Leu Ser Ser Ser Leu Phe Ile Gly Arg Cys  
   1              5                 10                 15  
 Phe Ser Ser Gln Ser Gln Asn Phe Ser Phe Ser Lys His Leu Ile Thr  
   20             25                 30  
 Arg Glu Ile Ser Pro Ala Lys Lys Pro Ala Lys Ala Lys Ile Pro Pro  
   35             40                 45  
 Pro Leu Lys Ile Ala Thr Met Pro Ile Pro Ile Glu Thr Asn Gly Ala  
   50             55                 60  
 Ser Gln Pro Ile Met Ser Glu Arg Asp Pro His Asn Leu Ser Arg Phe  
   65             70                 75                 80  
 Ser Phe Ser Met Leu Thr Leu Ile Val Ser Ile Leu Phe Ser Cys Arg  
   85             90                 95  
 Ala Ser Ser Ser Arg Cys Val Asp Ser Thr Glu Ser Leu Trp His Pro  
   100            105                110  
 Tyr Glu Glu Lys Ser Glu Arg Ile Pro Cys Phe Val Ser Arg  
   115            120                125

&lt;210&gt;1290

&lt;211&gt;94

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1290

Arg Asp Tyr Val Gly His Pro Met Gly Ile Tyr Arg Asn Arg Arg Cys  
   1              5                 10                 15  
 Arg Gly Asp Val Trp Thr Ser Lys Lys Ser Ser Leu Cys Arg Ala Ser  
   20             25                 30  
 Tyr Ser Leu Arg Ile Phe Arg Leu Pro Asn Asn Leu His Leu Ile Phe  
   35             40                 45  
 Phe Ile Thr Phe Trp Leu Ala Leu Pro Thr Ser Thr Ser Glu His Pro  
   50             55                 60  
 Gln Ser Leu Tyr Ser Trp Cys Pro Arg His Pro Arg Arg Glu Met Gly  
   65             70                 75                 80  
 Arg Ser Ala His Glu Cys Arg Pro Asp Tyr Cys Cys Phe Ile  
   85             90

&lt;210&gt;1291

&lt;211&gt;98

&lt;212&gt;PRT

&lt;213&gt;Chlamydia pneumoniae

&lt;400&gt;1291

Met Gly Phe Cys Asn Phe Val Ile Tyr Pro Cys Arg Glu Glu Phe Asn  
   1              5                 10                 15  
 Ile Phe Cys Cys Pro Ser Ala Asn Lys Leu Ser Ile Phe Ile Phe Thr  
   20             25                 30  
 Pro Ala Asn Ala Asp Ser Gly Gly Asp Arg Met Gly Ser Val Arg Glu  
   35             40                 45  
 Ser Ser Thr Thr Arg His Asp Tyr Phe Lys Asp Ser Ala Val Phe  
   50             55                 60  
 Glu Arg Phe Tyr Thr Gly Ile Tyr Arg Asn Asp Ile Pro Lys Glu Leu  
   65             70                 75                 80  
 Phe Arg Lys Tyr Arg Cys Ile Arg Asp Asp Ile Lys Ile Phe Asp Phe  
   85             90                 95  
 Cys Leu

&lt;210&gt;1292

&lt;211&gt;20

&lt;212&gt;DNA

&lt;400&gt;1292

tgaccacttg gttgttaggga     20

&lt;210&gt;1293

&lt;211&gt;20

&lt;212&gt;DNA

&lt;400&gt;1293

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